Expert group joint opinion

Evaluation Procedure: Assessment of Study Field

Higher Education Institution: Riga Technical University

Study field: Seafaring

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Summary of the Assessment of the Study Field and the Relevant Study Programmes

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The expert team finds the assessed study field “Seafaring” (hereafter referred to as: Study Field), which officially implements RTU, matching both the Latvian Maritime Academy of Riga Technical University (RTU LMA) mission as well as the needs and the development trends of the society and national economy, hence it recommends it to be accredited. At the same time, experts have noted certain shortcomings addressed to university management and programme directors.

RTU LMA has developed a sufficient system to determine the financial resources needed for implementation for the Study Field and its six study programmes. The interconnection of the study programmes included in the study field is clear and logical. Resources and provision of the Study Field mostly are sufficient and ensure the achievement of the objectives and planned results of the study programmes. RTU LMA has ensured good infrastructure and necessary resources, material and technical provision required for the implementation of the study field. During the on-site visit it was verified that students and teaching staff of RTU LMA have a wide opportunity to use the different communication technology tools and facilities provided by the library (literature, access to databases and periodicals, services, etc.). In overall, the study infrastructure, namely, main premises of RTU LMA leaves a very positive impression while specific equipment required for the implementation of certain study programmes require slight improvements regarding the equipment for practical training.

The management of the Study Field seems to be well defined and applied. The new combined LMA RTU Quality Management and Assurance structure, based on student feedback, which have been merged effectively is a particular strength. This ongoing process bodes well for the future development of well administered, attractive state-of-the-art courses and programmes. A special strength is also the recent full compliance with the professional requirements of the Maritime Administration of Latvia, ensuring the fulfilment of international STCW requirements. The mechanism for obtaining and providing feedback, including from students, graduates and employers, is effective and focused on the improvement of the study field. Overall, the quality assurance system, aligned with standards such as STCW, ESG, and ISO 9000:2015, shifted its focus in 2023 to align with RTU strategic goals, emphasising institutional excellence.

Involvement of RTU LMA in the development of the science and research field in the specific field of study is obvious, showing also the connection between the study process and science. RTU LMA has developed various mechanisms for staff involvement in scientific activities while mechanisms still must be found to involve staff whose scientific activities are insignificant and not reflected in the form of publications and projects. Also, intensive work is being done on student involvement in scientific activities. In overall, RTU LMA has high potential to improve scientific indicators of this study field in the nearest future using consolidation grants raising the scientific capacity of elected scientific and academic staff, including the number of publications and projects in the field related to the study programmes.

In cooperation with the maritime transport sector, RTU LMA contributes to the improvement of professional development of staff in the sector as it gives the opportunity to update teaching materials according to the latest industry requirements and trends. Academic staff and study programme administration participate in various experience exchange events, cooperating with higher education institutions of other countries, meeting representatives of relevant institutions and entrepreneurs, as well as promoting mutual discussion of current developments in the field, students research and projects, followed by a detailed analysis of the outcomes. At the same time high teaching staff circulation between the RTU LMA and commercial companies, as potential overload of staff is observed.

In overall, after consolidation with RTU, additional opportunities have emerged in the use of RTU

infrastructure and material and technical support for the implementation of the study field and the corresponding study programmes. It is also essential in a situation where the low number of students in individual study programmes threatens the financial sustainability of these programmes, and joint forces need to find the most appropriate solution.

I - Assessment of the Study Field

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1.1 Management of the Study Field

Analysis

1.1.1.

The study field and the relevant study programmes comply with the main directions of the strategic development of the higher education institution/ college and meet the needs and the development trends of the society and national economy. The interconnection of the study programmes included in the study field is clear and logical.

The claimed objective of the study field Seafaring is the provision of sustainable, high-quality and widely recognized higher professional maritime education, thus providing the Latvian society with well prepared and labour market-ready graduates. Aside of that, the study field aims at enacting, maintaining and developing a multidisciplinary research by:

- preparing well qualified ship's officers by providing them with the required knowledge, skills and competences;
- preparing well qualified specialists for the maritime industry by developing for graduates abilities to independently acquire, analyse and apply knowledge in solving real tasks;
- ensuring a continuity of studies in all programmes relevant to the study field.

The Latvian Maritime Academy (LMA hereafter) as a structural unit of Riga Technical University (RTU) provides higher professional maritime education at all levels that begin with the undergraduate up to the doctoral programme. This multi-level education approach in structured such that:

- it provides opportunities for students to develop their motivation for further lifelong learning, but also to encourage those who foresee a research career;
- it provides the opportunity to attract new teaching staff for an academic position;

The declared aims and objectives of the study programme seem to be aligned to the objectives of the integration of the LMA in the RTU since:

- LMA is being established within the RTU as the main internationally competitive maritime education and research centre in the Republic of Latvia, in accordance with the cooperation agreement No. 2-2e/22/392 "On the integration of the Latvian Maritime Academy into the structure of Riga Technical University" signed by the Ministry of Education and Science, RTU and LMA;
- LMA provides higher education and further education in the field of seafaring, as well as implementation of professional education programmes for seafarers in accordance with the 1978 International Convention on Standards of Training and Certification of Seafarers and Watchkeeping (STCW Convention) and other Latvian legal requirements.

Nevertheless, a question might be raised on the compatibility of the two institutions. The self-evaluation report mentions the Statutes of RTU and LMA, a fact that may lead to the conclusion that LMA acts as a “state-in-state” institution inside the RTU, a fact which is at the limit of normality.

The Seafaring study field objectives seem to correspond to the strategic development directions of RTU LMA and to the needs of the Latvian economy since in all areas of water-based transport the demand for professionals is expected to increase in the future. Although not sustained by factual data, the SAR states a growing demand for officers coming from both national and international ship officers of the labour market, since a growth of the world fleet is foreseen, despite the dramatic

reduction of the global trade, (Data from BIMCO ICS Seafarer Workforce Report 2021).
The relevance of the study field to the strategy of the development directions, may sustain the Latvian interests, based on documents such as the National Development Plan (NDP), which is aimed at achieving the vision contained in the Latvia 2030 document.
RTU LMA provides the students with an opportunity for acquiring an internationally recognized qualification that is in demand and makes a significant contribution to the Latvian economy. LMA graduates are employed either by Latvian or by international shipping companies. The relevance of the study field and study programmes to the strategic development directions, development needs of society and the economy from the point of view of the interests of Latvia are relevant, based on documents such as the National Development Plan (hereinafter NDP), which is aimed at achieving the vision contained in Latvia 2030. Moreover, seafarers can continue their studies after graduation through the lifelong learning opportunities offered by the university by following either a Master's programme or a PhD one, knowing that the salaries are more than attractive, i.e. ranging in 2019 from 3.6 to 6 times higher than the Latvian average, see the 2.1.1 section of SAR, at page 19.
The Transport Development Guidelines of the Republic of Latvia (TDG hereafter) identified a series of policy outcomes to be achieved:
- Improved mobility opportunities;
- Reduced GHG emissions from transport and improved environmental quality;
- Competitive transport and logistics infrastructure and services;
- Improved transport safety and security;
- Promoting innovation and training highly qualified professionals.
The introduction of new technologies and digital solutions in maritime transport is increasing the demand for highly skilled professionals. The quality of maritime education is periodically assessed internationally. The International Maritime Organization (IMO) inspects its compliance with the requirements of the International Convention on Standards of Training and Certification of Seafarers and Watchkeeping (STCW Convention) and the Code, and the European Maritime Safety Agency (EMSA) visits EU Member States to ensure that the relevant EU requirements are implemented in relation to the above IMO standards. Latvia is included in the IMO "White List", which is a confirmation that all the requirements of the STCW Convention and the Code binding for Latvia have been implemented and are in compliance. In the beginning of December 2024 European Maritime Safety Agency (EMSA) visited Latvia to examine the seafarer education system and in particular, how the EU directives were implemented in, see https://docs.google.com/document/d/1iXSbfPYQK2dgUTGsT-OkO12_7Jhj-xBP/edit.
Worth mentioning that in 2023, 10,830 active seafarers (seafarers holding valid professional qualification documents) were registered in the Register of Seafarers of the Latvian Maritime Administration, out of which 71% are Latvian citizens, 23% are Latvian non-citizens and 6% are citizens of other countries. Of the total number of Latvian seafarers, 9,895 or 91% are certified to work on board merchant vessels, while 935 seafarers are certified to work on board inland waterway or fishing vessels. 55% or 5,483 seafarers of the certified merchant seafarers are ship officers (2,573 shipmasters, 2,558 ship engineers, 352 electrical and refrigeration engineers) and 45% or 4,412 are ratings (2,173 deck crew seafarers, 1,120 engine room crew seafarers, 1,119 ship's service personnel), https://www.lja.lv/news/latvija-registreti-10-830-aktivo-jurnieku
The total number of registered active seafarers has decreased by 13% or 1646 seafarers over the past five years. The number of merchant navy officers has decreased by 4% or 227 ship officers. The largest decrease of 105 seafarers, or 23%, is in the number of electrical and refrigerating engineers, while the smallest decrease is in the number of ship's engineers, down by 26 engineers, or 1% of the number of engineers at the beginning of 2018. The number of ship managers has decreased by 96 seafarers or 4% compared to 2018. The number of ratings has decreased significantly, with an overall decrease of 1 332 seafarers or 23% compared to 2018 (509 fewer ratings on deck, 496 fewer ratings in the engine room and 317 fewer service staff),

https://www.lja.lv/news/latvija-registreti-10-830-aktivo-jurnieku.
Wrapping up, the group of experts may conclude that the aims of the study field are clearly defined and attainable. The study field and the relevant study programmes comply with the main directions of the strategic development of the higher education institution and meet the needs and the development trends of the society and national economy. The interconnections of the study programmes included in the study field are clear and logical.That is because they use the same educational infrastructure and the academic staff is more or less the same. Moreover, several courses of the curricula of programmes are the same.

1.1.2.
In accordance with RTU LMA Strategy 2018-2023, which has been updated in 2023, see https://eplatforma.aika.lv/index.php?r=expert%2Fannex%2Fdownload&id=2078&key=56&suffix=English RTU LMA defined a series of overall, mid-term and short-term quality objectives and plans each academic year, as well as evaluates the level at which the objectives set in the previous academic year were attained. Moreover, the annual RTU LMA Management Report includes a risk evaluation based on a SWOT analysis, aimed at highlighting the achievements and the risks of the study field. A list of the most relevant findings of the SWOT analysis is as follows:

Strengths:
- RTU LMA is one of the seven maritime educational and training institution in Latvia that provides education and training of top-level maritime specialists;
- Appreciable high employment rate of graduates (over 90% after graduation) even though it is not clear how may the graduates were employed prior of the graduation of the master programme;
- High demand in the industry for RTU LMA graduates;
- Latvia is currently ranked first in the European Union in terms of the number of seafarers to the economically active population (data from Latvian Maritime Administration Seafarers' Register);
- Close and successful cooperation with employers, both Latvian and foreign companies, which provide practical training on board throughout the world's merchant fleet. Aside of that, employers are involved in the study process from throughout the full period of the studies by providing consultancy and participation in the examination committees;
- RTU LMA has the status of a scientific institution;
- Industry representatives and foreign guest lecturers are involved in the teaching activity;
- In cooperation with the maritime transport sector, RTU LMA contributes to the improvement of professional development of staff in the sector (a strategically important point for LMA - exchange of experience and improvement of qualification gives the opportunity to update teaching materials according to the latest industry requirements and trends).

Weaknesses:
- The inadequate remuneration in academia, which hinders the attraction of highly qualified lecturers and visiting lecturers from the industry, where salaries are much higher;
- Poor international scientific cooperation and visibility since RTU LMA was registered as a Scientific Institution in 2019;
- Low number of students in some study programmes threatens the financial sustainability of those programmes;
- Insufficient development of the RTU LMA Training Centre.

Opportunities:
- Increased participation in ERASMUS+ international exchange programmes;
- Development of cooperation with various Latvian and foreign institutions, including employers and organizations of employers;

- A more aggressive promotion of RTU LMA at the international level;
- Use of the latest technologies and solutions in the teaching process, by improving the teaching materials and digitalization;
- Continuous professional development of the academic staff doubled by an improvement of the remuneration;
- Introduction of new study programmes in line with labor market demand;
- Competing for European Union and other external funding schemes;
- Increased use of the modular training system.

Threats:
- Declining numbers of applicants due to demographic trends and emigration;
- Uneven, unpredictable and low public funding for higher education, including maritime education;
- Ageing of academic staff, which is critical for the time being;
- The decrease of the attractiveness of the programme compared to other professions existing labour market offers;
- Weak knowledge of science subjects among applicants.

Worth mentioning here that for avoiding the threats, RTU LMA succeeded in accessing EU funds for the implementation of the project "Information and Communication Technologies (ICT) platform for e-learning and management processes support at the Latvian Maritime Academy", Specific Support Objective 8.2.3 "Ensuring better governance in higher education institutions". Under this financing umbrella, the bachelor programmes "Maritime Transport - Navigation", "Maritime Transport – Marine Engineering" and "Maritime Transport – Marine Electrical Automation" could be developed and implemented. Aside of those above mentioned, the Master study programme "Maritime Transport" was subjected to a needed improvement. In spite of the SAR statements, the RTU did not provide any verifiable factual data, a fact that put the group of experts in the impossibility to confirm all those facts reported by the RTU LMA.

The RTU LMA adjusted the activities aimed not only at avoiding threats and harnessing the existing opportunities, but also at disposing the weaknesses. The activities carried were done under the framework of the European Union Funds Operational Program "Growth and Employment" Specific Support Objective 8.2.2, in which several activities of the action "Measures to develop the competence of academic staff" were carried out:
- Maritime English training (37 academic staff trained);
- Internships in an industry-related organisation;
- Specialized training in 11 topics for 50 persons.were carried out (https://eplatforma.aika.lv/index.php?r=expert%2Fannex%2Fdownload&id=2078&key=56&suffix=English).

Worth mentioning that aside of all those noted above, ten guest international lecturers were involved in the training process within the framework of the EU project in the activity "Provision of foreign academic staff" for promoting international cooperation and the development of competences, foreign academic staff, Section 2.3.5 of the SAR.

To conclude, one may notice that the RTU LMA has identified and analysed the strengths, weaknesses, opportunities and threats of the study field and integrated them into development planning documents (Annex "RTU_ LJA_strategy 2023-2027 v3.docx").

1.1.3.

Obviously, in the reporting period the management structure of RTU LMA the study field and its subsequent programmes have changed several times, being now part of faculties of Navigation and Ship Management and Marine Engineering since September 2021. At the date of writing this external evaluation report the faculty seems to be in the listed RTU portfolio on a peripheral place of the university main education portfolio as shown in

https://www.rtu.lv/en/university/structure-and-administration/faculties/latvian-maritime-academy-of-riga-technical-university.
Prior to joining RTU, internal quality control at the LMA level and the study field was ensured by the Vice-Rector or the Vice-Rector of Studies, whereas at the level of departments and faculties – the internal quality control was ensured by the department directors/deans of faculties, respectively. The quality of the study programme was ensured by the study programme director and the academic staff implementing the study programme, and monitored by the administration of the relevant division/faculty, but the quality of the Master's study programme "Maritime Transport" was ensured by the Vice-Rector/Vice-Rector for Studies. Support functions for the development and implementation of the study programmes are continuously provided by the Study Department, the Study Centre and the Training Centre, as well as by the IT Team, the Quality Management Team, the Maritime Internship Planner, the Housekeeping Department as well as the Accounting Department, as figured in SAR section 2.1.3 at page 24 by “RTU LMA organizational structure (approved on 2 January 2023)”.
Following the incorporation of LMA into RTU several adjustments in the organisational structure were required. As a result, two centres, namely the Centre of Shipping Management and Navigation and the Marine Engineering Centre, were established to replace the former faculties, each centre containing two departments. From 1 November 2023, internal quality control at the level of LMA and the field of study is ensured by the chairman of the field of study as shown in the "RTU Study Programme Governance Structure" Annex, see also SAR section 2.1.3 at page 24 by “RTU LMA organizational structure. The quality of each study programme is ensured by the study programme director and the academic staff enrolled with teaching/research activities in that programme, and controlled by the administration of the relevant institute/center or department. The annotations of the study programmes and the descriptions of study courses, methodologic materials, the most recent references such as reports, study papers, internship reports and final papers are reviewed every year and eventually recommended for use. Academic staff and study programme administration participate in various experience exchange events, cooperating with higher education institutions of other countries, meeting representatives of relevant institutions and entrepreneurs, as well as promoting mutual discussion of current developments in the field, students research and projects, followed by a detailed analysis of the outcomes, SAR section 2.1.3 at page 24 “RTU LMA organisational structure (approved on 2 January 2023)”.
Doubtless, a key role in the study programme development is played by its director, whose duties and responsibilities are clearly described in his job description document, as shown in the table at Section 1.4 of SAR Among many other responsibilities, the most relevant ones are directly related to the development of the study programme by continuously improving the curricula in accordance with the scientific achievements, the requirements of the economic sector to which the programme addresses. Thus the quality of the implementation of the study programme is assured. The programme director is in charge with the coordination of the development of study syllabi, assuring in the meantime the cooperation with the RTU Study Department, by intertwining the activities with other university departments members that teach classes at the study programme. Last but not least, the director is responsible for internationalisation.
RTU LMA administration continuously monitors the compliance of the premises and technical equipment with the standard quality requirements, stressing on the necessity of a proper educational infrastructure, as shown in the table at Section 1.4 of SAR, pag. 13-17. Worth mentioning that an important supporting role for a good implementation of a study programme at RTU is provided either by the Study Department or by the Curriculum Design Unit.
Aside from all those mentioned above, there is a Study Programme Committee, which includes the directors of all study programmes, senior lecturers, representatives of employers, and a student representative (as shown in the "RTU Study Program Governance Structure" Annex). The structure clearly indicates that the Study Field Committee supervises the activities of the study field by

conducting an expert assessment of the content and quality of implementation of study programmes at the end of each academic year, assessing their compliance with the stated objectives of the study field, the requirements of the scientific field represented and the labour market, as well as taking into account the opinion of graduates and students on the quality of the programmes. Initially, the Study Field Committees make decisions on various types of issues, which are further approved by the faculty/RTU LMA Council, while further communication takes place with the Study Department, which prepares Senate drafts (based on both the Committee and Faculty/RTU LMA Council decisions) for consideration by the Senate Study Quality and Program Committee, where the RTU Vice-Rector for Studies also participates and engages in discussion on the relevant issues. Once the Senate Committee on Quality of Studies and Programs reviewed and approved the project for consideration by the Senate, it advanced to the regular meeting of the RTU Senate, as described in the table at Section 1.4 of SAR, pP. 13-17.
RTU has established a stable system for the management and development of study programmes. Proposals for changes in study programmes are developed by the study program committee, based on the recommendations of teaching staff, feedback from employers, Student Council, as well as the latest trends in the national economy and the labor market. The Study Program Committee asks the faculty/RTU LMA Council to review and approve them. On the basis of the decision of the Council, changes in the field of study are promoted and approved by the RTU Senate. Changes in the structure of study programmes are approved by an order of the RTU Vice-Rector for Studies. Technical support of the study field is provided by the study programme administration as well as by the RTU IT Department. Such cooperation in the implementation of study programmes is considered to be effective and contributing to the development of the study field. Improvement of the management structure of the RTU LMA study field "Seafaring" and the corresponding programmes and integration of LMA into the RTU ecosystem will enable LMA to increase the efficiency of the management of this study field and the study programmes involved, as shown in the SAR section 2.1.3.
Summing up, the expert group considers that the excessive developed management structure of the study field and the corresponding study programmes at all levels is oriented towards the development of the study field, decision-making takes place efficiently, the support provided by the administrative and technical staff ensures all the needs of the study programmes corresponding to the study field. However, in expert group opinion the multitude of commissions, committees, councils, etc. is not only confusing for someone who is outside of the university, but it may also raise a doubt whether their duties overlap or not.

1.1.4.
Given its crucial importance, the student admission process represents a key factor not only for the selection of the most valuable future students, but also for the RTU's whole image in the society. That is the reason for which both LMA and RTU pay special attention to the admission process.
Prior to joining the RTU on 1 November 2022 the admission procedure and requirements at LMA were regulated by the Quality Management Procedure P5 "Admission", Regulation No. 20 of 27 September 2004 "On Admission of Students and Learners to Latvian Maritime Academy and the Maritime School of the Latvian Maritime Academy" as amended, Regulation No. 7 of 24 February 2003 "On the Master's Degree Program of Latvian Maritime Academy", as amended, and the annual Admission Rules, which were approved by the LMA Senate by 1 November of the previous academic year. The internal normative acts of LMA were created on the basis of the normative documents in force in the Republic of Latvia, which determined the procedure for the admission process in Latvian higher education institutions, as well as admission to the regulated specialties. The historical documents are provided in 2.1.4. Section of the SAR at https://omars.latja.lv/login/index.php .

1.1.4.1 Admission of students at the full-time study programmes

Admission to full-time studies was based on fulfilling a series of requirements: for professional bachelor study programmes - secondary or vocational secondary education, results of centralised examinations (in Latvian, mathematics and foreign language) and appropriate health condition; for first-level professional higher education study programmes (admission from academic year 2019/2020) - secondary professional maritime education (or vocational secondary education from academic year 2021/2022 for a tuition fee), results of centralised examinations (in Latvian, mathematics and foreign language), qualification exam results in specialty and appropriate health status; in the professional Master's study programme – relevant professional bachelor's or professional higher education, for graduates of comparable study programmes - fulfilment of the additional requirements. In the expert’s opinion, using the health status of a candidate as a condition for the entrance examination looks restrictive since the equality of chances for access to education seems to be not considered. For the sake of equity, a candidate who might have some health problems should have the same chances as the others. One may raise the question of why not having a sportive selection instead. This may be a better choice since during the evaluation visit at the meeting with the employers the evaluation team was informed that the graduate students may get a job in shipping companies, ports administrations and so one, positions for which the health condition is not necessarily a must.

1.1.4.2 Recognition of formal education

Recognition of study courses is carried out on the basis of LMA regulations No. 6 of 24 April 2006 "On the Procedure for Starting Studies at Later Stages at Latvian Maritime Academy" and Procedure No. P6-1 "Organization and Management of the Study Process" and its sub-procedures 6.3.6 "Recognition of Study Courses/Practice Completed at LMA or Another Higher Education Institution" and 6.3.7 "Recognition of Study Courses/Practice Completed during Mobility Abroad". In the reporting period, 692 applications were examined, out of which 167 were for the recognition of study courses acquired in mobility abroad, mainly in the study programme "Port and Shipping Management", 309 for the recognition of study courses previously acquired in the same or equivalent study programme, 155 for study courses acquired in another higher education institution and 61 for study courses acquired in another LMA study programme. Applicants, except those on mobility abroad within the ERASMUS+ program, submit an application and attach an academic certificate or diploma for the previously completed higher education or part thereof. If the student/applicant has been a student at LMA, the academic certificate is not compulsory, as the recognition of studies is based on the personal file in the LMA archives..

1.1.4.3 Recognition of professional experience/formal learning acquired in the past

During the reporting period, 10 students applied for the recognition of competences acquired outside formal education or through professional experience. In 2020 the Senate approved the LMA Regulation No. 56 "On Recognition of Competences Acquired Outside Formal Education or in Professional Experience at Latvian Maritime Academy", which is based on the Cabinet of Ministers Regulation No. 505 of 14 August 2018 "Regulations on Recognition of Competences Acquired Outside Formal Education or in Professional Experience and Study Results Achieved in Prior Education".

According to Regulation, applicants shall submit an application to the Study department and attach copies of the relevant documents, presenting the originals. The documents submitted by the applicants to the Study department shall be forwarded to the Recognition of Learning Achievements Committee for examination after paying a fee. The Board will decide on each application whether or not to recognize the knowledge, skills and competences acquired through professional experience/formal learning. In the reporting period, 6 positive decisions have been taken, mainly for the recognition of knowledge and practical skills acquired in maritime practice, being subjected to a final test/examination.

1.1.5.
RTU LMA possesses a document entitled “Regulation on the Assessment of Learning Outcomes”, which was approved by the RTU Senate in the meeting held on the 30th of May 2022, Minutes No 633, which is a collection of rules for assessing the outcomes, available on Studies Regulations page of RTU web page (https://www.rtu.lv/writable/public_files/RTU_5.4._7.4.studiju_rezultatu_vertesanas_nolikums_2022.pdf (in Latvian) with its English version contained in Annex 04 of the list of internal regulations. Summative assessment system is used in the evaluation of student achievements based on a final grade composed of several different components. Particularly, any course descriptions of a certain study programme contain a set of relevant acquired knowledge, developed skills and competences as well as their evaluation system. Is important to emphasise that an important weight in the final score is represented by the proven learning outcomes. Pedagogical methods used in the implementation of study courses, as well as assessment forms and methods are selected by each professor who teaches the course in compliance with the curriculum and specifics of the programme, as well as to the student needs. The particular assessment criteria are communicated transparently to all the students at the first class of the semester.
Grading based on such a summative assessment system is advantageous for the student who may take a better intensity of effort during the semester. Criteria for assessment of the level of knowledge and of individual/home works are published on ORTUS e-study platform beforehand. During the semester, the assessment for each home task, test, report, presentation and any other task is assigned a certain weight in the final grade. Usually, exam grades do not exceed 50% of the final grade. Academic staff should take into consideration and also assess student attendance. Assessment structure for the study course is determined by the academic staff themselves, abiding the resolution of RTU Senate that the exam grade may not contribute more than 50% to the final grade
In order to advance professional pedagogical competences of the academic staff, courses and seminars on the newest pedagogical methods are organised regularly by RTU, (https://www.rtu.lv/writable/public_files/RTU_5.4._7.4.studiju_rezultatu_vertesanas_nolikums_2022.pdf.
Qualification advancement is provided at both the University and faculty level, organising academic conferences and methodological seminars. The Centre for Academic Excellence has been established and successfully operates at RTU; it organises various events aimed at professional advancement of academic personnel at the University level.
During the reporting period, until joining RTU, the methods and procedures used in the assessment of student achievements at LMA were practically the same as those described above in this paragraph and are defined by the LMA's internal regulations:
- Regulation No. 10 of 31 March 2003 "On semester examinations at Latvian Maritime Academy";
- LMA Procedure P6-4 "Semester Tests";
- Study course descriptions.
The summative assessment system was introduced at LMA in the academic year of 2014/2015, at the same time establishing stricter assessment criteria and methods, and the new course descriptions with expanded sections "Tasks and organisation of the students' independent work" and "Planned study outcomes and their assessment criteria" - in the academic year of 2020/2021. The choice of criteria and methods for the assessment of study achievements takes into account the specific nature of each study programme and the objectives to be achieved, as well as the students needs,
(https://www.rtu.lv/writable/public_files/RTU_5.4._7.4.studiju_rezultatu_vertesanas_nolikums_2022.pdf.
Taking all the above described rules, principles and procedures for assessing achievements of students it may be considered that the assessment methods and procedures are well defined and

fully transparent.

1.1.6.
RTU took part in different initiatives that promote academic integrity related issues. RTU is a member and one of the founders of the European Network for Academic Integrity (ENAI). The Dictionary of Academic Integrity Terms and Guidelines has been developed and published by RTU Press. In the framework of Specific Support Objective (SSO) 8.2.3 of the project “Development of Efficient Management of Riga Technical University”, RTU, in cooperation with the University of Latvia (UL) and Riga Stradiņs University, not only develops educational aids, but also participates in the establishment of the Latvian national academic integrity organisation and development of plagiarism control tools, as described in Section 2.1.6 of SAR. The documents regulating the academic integrity of the LASE should be available to all those interested. In spite of the SAT that indicates at page 29 the link http://www.latja.lv/lja-kvs/, it seems that this is wrong.
Students graduating RTU study programmes can upload the electronic versions of their graduation theses in ORTUS portal to verify their work in respect to plagiarism. RTU uses two major plagiarism control tools:
- The JCPCS plagiarism control system, which is used in cooperation with the University of Latvia. This system is used to check graduation theses after their upload into the ORTUS environment.
- TurnitIn, the world’s leading tool for the correction of written papers and combating plagiarism that is used daily by millions of students and academics around the world. TurnitIn tool is integrated with RTU ORTUS e-study system and provides full service of submitting, correcting, verifying the originality. This tool is used to check all the electronic versions of graduation papers submitted for defense, as described in https://www.rtu.lv/writable/public_files/RTU_rtu_studiju_reglaments_7.1.1.4..pdf,.
Graduation papers are checked in both systems in parallel. Doctoral Theses are checked in a similar way.
There is a Code of Ethics of RTU Students, Academic Personnel and Staff, which became effective at RTU almost two decades ago, as shown in the file of Annex 19 of the List of Internal regulations. There is also an Academic Integrity Code, which looks not only to strengthen academic culture and integrity in the academic environment of RTU, but also to explain the concept of academic integrity and related actions, to define main procedures in the evaluation of academic fairness violations. It is available ont the RTU homepage at the address https://www.rtu.lv/writable/public_files/RTU_rtu_studiju_reglaments_7.1.1.4..pdf, Its translated into English is part of the Annex 38 of the List of Internal regulations.
RTU LMA has developed since 2019 and then integrated into the quality management system (QMS) a number of internal normative documents aimed at strengthening the academic culture of integrity in the RTU LMA academic environment. The documents describe the principles of academic integrity and the subsequent actions to be taken, list the most frequent violations of the principles of academic integrity in the academic environment and the responsibilities of RTU LMA staff to prevent academic dishonesty. Following the reorganisation of the LMA and its incorporation into the RTU infrastructure, some of these normative documents became obsolete. However, in addition to the RTU regulatory documents, two LMA internal regulatory documents in the aria of academic integrity remained valid:
- Regulation No.5 "On the internal procedure of LMA in the study work", which provides the definition of copyright infringement and determines the LMA's actions in case of plagiarism;
- Sub-procedure 6.3.5 "Detection of copyright infringements" of the LMA Procedure No P6-1 "Organization and Management of the Study Process".
The documents regulating the academic integrity used before for plagiarism control, were updated in 2020 when RTU LMA joined the Unified Computer-based Plagiarism Control System (UCPPS), which aims to check the originality of the content of final theses. After its integration into RTU, LMA

is using other opportunities offered by RTU, which are significantly more extensive and will allow LMA to further improve the mechanism of implementation and compliance with the principles of academic integrity.
The new defined procedures describe how the report on the violation of the student's academic integrity is filled, registered, reviewed, and appealed. Informing and educating students about the aspects of academic integrity takes place both within the study courses and in specially organised seminars. Both students and academic staff have access to the book “Glossary for Academic Integrity” published by RTU publishing house (available at http://www.academicintegrity.eu/wp/glossary/). Particular units implementing the study programmes developed a control mechanism, which is applied by the work of the Advisory Examination Commission.
Students are instructed about plagiarism and its consequences several times, thus foreseeing the reduction of the plagiarism rate. Once the student comes to defend the thesis, the electronic version of the performed work and the thesis are checked with a free plagiarism control tool in the presence of the student If the similarity rate is higher than 20%, The papers are examined, reasons of matches in the text are evaluated and a decision is made whether the students should be allowed to defend their thesis or not.

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions
In spite of the overlapping of responsibilities caused by the LMA and RTU merge process, the management of the study field seems to be well defined and applied. Indeed, in several senses one may easily see an over reglementation, which is confusing for someone who is not very familiar with the RTU organisation. In the group of experts’ opinion, the RTU has still much to do to make the two QA systems fully compatible. Summing up, one may notice that the aims of the study field are clearly defined and attainable. The interconnection of the study programmes included in the study field is clear and logical. The management of the study field and of the subsequent study programmes is well defined being supported by the administrative and technical staff. There is a coherent system for the admission of students, the recognition of the prior study periods, professional experience, prior formal and non-formal education and for the assessment of students. There are clear principles of academic integrity, which are applied rigorously.

Strengths
1. In spite of the fact that the study field is a new one, it benefits from the widely recognized prestige gained when it was organized in LMA as two different study fields.
2. The interest shown by potential employers in hiring the graduates of the study programmes which belong to the study field.

Weaknesses.
1. In expert group opinion the multitude of commissions, committees, councils, etc. is not only confusing for someone who is outside of the university, but it may also raise a doubt whether their duties overlap or not.

1.2. Efficiency of the Internal Quality Assurance System

Analysis

1.2.1.
The internal quality assurance system at the RTU LMA is structured around external standards, including the International Convention on Standards of Training, Certification and Watchkeeping for

Seafarers (STCW), Latvian regulatory enactments and ISO 9000:2015. Up until 2023, LMA's quality policy aligned with its mission to improve research, internationalization, personnel development, and cooperation with social partners. From 2023, under RTUs new strategy, RTU LMA's focus shifted to ensuring academic and institutional excellence, aligning RTU LMA's strategic objectives with RTUs broader development goals. (SAR p. 31)

RTU LMA employs several tools in its quality assurance framework, including annual management reports, internal and external audits, self-assessment reports, client satisfaction surveys, and annual quality goals. These reports, however, are prepared annually, which may limit responsiveness to mid-year quality issues. The external and internal audit system includes annual evaluations by DNV GL Latvia SIA and the Seaman's Register, but the effectiveness of these audits depends heavily on the quality and thoroughness of these external parties. Annual self-assessment reports provide programme-specific insights but are only reviewed once per year, potentially delaying improvements. Client satisfaction surveys are conducted across multiple stakeholder groups, though reliance on surveys may overlook more nuanced stakeholder concerns. Annual quality goals, aligned with strategic plans, are intended to enhance resource transparency, yet their long-term focus may detract from more immediate quality improvements in study programmes. RTU LMA's quality system promotes principles like impartiality and academic fairness (SAR p. 32), but the integration of these principles is difficult to measure and enforce uniformly.

Key indicators of system effectiveness include European Maritime Safety Agency's positive audit for seafarer certification, cooperation with maritime organisations, and high graduate employment rates, with employer satisfaction averaging 7.05 out of 10 (SAR p. 32). However, feedback mechanisms rely heavily on traditional surveys and employer ratings, which may not fully capture evolving industry requirements or insights from faculty and students. Additionally, while RTU LMA emphasises international collaboration and faculty involvement in programme updates, continuous alignment with fast-changing maritime technologies remains challenging. Faculty collaboration and consultation with professional representatives support programme relevance, and relies on voluntary and periodic input.

1.2.2.

The process of creating and updating study programmes follows the rules in the "Procedure for Application, Elaboration, and Amendment of Study Programmes." This document describes each step and who is involved, beginning with a new programme application and ending with programme closure. The Study Field Committee is responsible for reviewing and updating the study programme content. The committee's roles and tasks are outlined in the "Regulation on the Study Field Committee," which was approved by the RTU Senate on April 26, 2021. (SAR p. 34)

During the reporting period, RTU LMA revised its study programmes following RTU procedures P4-1 "Development of Study Programmes", P4-2 "Development of Study Plans", P4-3 "Development of Course Documents" and P4-4 "Maintenance of Course Documents" covering programme development and maintenance. This structure defines actions and responsible personnel. Two new programmes—"Ship Navigation Electronics" and "Maritime Transport"—were developed and accredited but were omitted from the "Seafaring" field accreditation (SAR p. 33). Programme reviews incorporate feedback from students, staff, industry experts, and employers, aligning with maritime sector needs. Yet, given the evolving demands of the maritime industry.

Under the SAM 8.2.3 project, three bachelor programmes ("Maritime Transport – Navigation," "Marine Engineering," and "Marine Electrical Automation") were improved. The project identified eight current and future workforce needs and six focal areas for programme modernization, leading to initiatives like adding "Maritime Innovation" and "Cyber Security in Maritime Transport" courses, increasing foreign faculty, and enhancing infrastructure and technology (SAR p.33-34). These actions show great promise and could be further enhanced by clearer prioritisation and more transparent criteria, ensuring their impact on programme effectiveness is fully realised.

Maritime sector experts contributed via focus groups, think tanks, surveys, and peer reviews, which informed curriculum revisions. Although industry involvement was well-received, the report lacks specifics on how industry input tangibly improved curricula or met workforce needs. The “Change Management and Implementation Plan” for Bachelor programmes has since informed updates to other programmes, including the Master’s in Maritime Transport. Programme development processes are governed by detailed procedural documents, aligning with industry specific national regulations including “Maritime Administration and Marine Safety Law”, “Regulations Regarding Certification of Seafarers”, “Regulations Regarding Certification, Implementation, and Monitoring of Professional Training Programmes for Seafarers” and others, potentially leading to an administrative burden. The Study Field Committee oversees curriculum revisions and programme assessments, with final approval from the Faculty Council and RTU LMA Council (must be noted that RTU LMA Council before reorganisation was the Senate (SAR p. 31)) (SAR. p 24-25)

1.2.3.
During the reporting period, RTU LMA's student complaints and proposals were managed under internally defined procedures. Once registered, a case manager was assigned, and decisions communicated in writing. If dissatisfied, students could appeal to the Academic Arbitration Tribunal or other bodies. However, examples from 2013 to 2023 show a recurring pattern of rejections, with appeals generally deemed “unfounded” without deeper engagement on potentially valid student grievances, which raises concerns about LMA’s responsiveness to student concerns (SAR p. 35-36). Appeals were often resolved without notable procedural change, highlighting an adherence to procedure over flexibility or improvement.
Key complaints included a 2021 incident where a student sought an exemption from COVID vaccination requirements, but was directed instead to online learning without much room for accommodation. More recent complaints dealt with minor issues like timetable conflicts and diploma delays. These responses, while procedurally sound, indicate minimal adaptability to student circumstances. Proposals from students were reviewed within department meetings or the Academic Council, and a few, like adding digital library access and sports facilities, were implemented. Since November 2022, RTU LMA adopted RTUs broader complaints procedure (SAR p. 36). While the change represents a step towards transparency, the report lacks evidence that student input significantly shaped these processes, which could indicate a limited commitment to actionable student feedback. In summary, a complaints submission procedure formally is in place and is functioning; however, there is limited evidence of consistent integration of student suggestions into ongoing processes.

1.2.4.
LMA, before joining RTU in November 2022, managed statistics through the LMA Study Department, collecting data for the State Education Information System and other agencies annually, while quarterly data were submitted for internal use. However, data management relied heavily on manual input into Excel, with limited automation in the "WIN-Students" system (SAR p. 36). Student feedback was gathered biannually post-exams and after internships, although processing such data remained resource-intensive. After merging with RTU, data collection was integrated with RTUs system, involving annual quality reviews based on 28 performance indicators and utilising Power BI tools for study programme analysis. This new system centralises data for faculty and programme directors, offering improved, data-driven visibility and standardisation across programmes (SAR p. 37). Despite the shift to RTUs structured data approach, the transition still reveals some reliance on manual processing, with limited digital infrastructure for seamless, real-time data analysis across different RTU LMA-specific needs.
Feedback mechanisms include semester-based student surveys, graduate polls, and a new mid-semester feedback process. Although feedback from students, employers, and graduates is actively

sought, it is questionable how effective the current system is to derive actionable data. The RTU LMA Maritime Council and RTUs Council Convention additionally involve employers, yet their impact on meaningful curriculum adjustments remains challenging to assess fully. This reliance on council feedback may delay or dilute actionable insights for program-specific improvements. While RTUs Quality Policy emphasises a data-driven, fact-based approach, it faces practical obstacles in translating some feedback into rapid and targeted improvements. Quality reviews and feedback mechanisms at RTU LMA remain complex and resource-intensive, particularly given the high number of stakeholders and reports required. Expanding digital platforms for more efficient, real-time data use and stakeholder engagement would likely enhance RTU LMA's operational effectiveness. In addition, it would be beneficial to consider seeking out alternative approaches to actionable data collection as, for example, current student surveys rely quite a lot on quantitative questioning.
There is limited evidence that RTU LMA effectively applies the principle of closing the feedback loop. The practice of responding to student feedback should not be left to the discretion of individual staff members but should be consistently implemented across the institution. This would shift the focus from viewing students as passive learners to recognizing them as active participants in shaping their educational experience. Students should be regularly informed about summaries of their feedback and the actions taken in response, including clear explanations for why certain suggestions are approved or rejected. Such a practice could enhance student engagement and motivation, encouraging them to provide more valuable insights into RTU LMA's study processes and overall experience.

1.2.5.
Study programmes in Latvian and English are published on the RTU LMA website http://www.latja.lv/ and RTU website. Detailed information on study programmes can be found in page dedicated to all study programmes - https://www.rtu.lv/lv/studijas/visas-studiju-programmas In general, the webpage and the information provided are clear, well-structured, and sufficiently detailed to meet the needs of individuals interested in the study programmes. Key details about admission requirements, programme content, learning outcomes, and other essential aspects are easily accessible and presented in an organised manner.

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions :
The Latvian Maritime Academy (LMA) quality assurance system, aligned with standards such as STCW and ISO 9000:2015, shifted its focus in 2023 to align with Riga Technical University's (RTU) strategic goals, emphasising institutional excellence. LMA's quality tools, including audits, self-assessment reports, and client satisfaction surveys aim to maintain academic standards. Programme reviews are incorporated annually. Initiatives under the SAM 8.2.3 project modernised key programmes and integrated industry feedback through focus groups and peer reviews, though detailed impact assessments are limited. A formal process manages student complaints, but historical data show many appeals are rejected without adapting procedures, raising questions about responsiveness. RTU LMA could benefit from more closing the feedback loop approach regarding student feedback. Data collection, though now integrated with RTUs Power BI-driven system, still relies on manual processes, highlighting the need for improved digital infrastructure. Public programme information is available on the RTU websites.

Strengths:
1. Various external assessment stakeholders ensure compliance with industry relevant regulations.

Weaknesses:

1. No consistent record of integration of student feedback into study processes and curriculum.
2. The SAR fails to provide factual data to prove the compatibility of the RTU LMA quality standards with the ESG provisions of ENQA. A deeper analysis of the adjustment of the own standards is required for a further evaluation of both study field and particular programmes offered by the university.

Assessment of the requirement [1]

1 R1 - Pursuant to Section 5, Paragraph 2.1 of the Law on Higher Education Institutions, the higher education institution/ college shall ensure continuous improvement, development, and efficient performance of the study field whilst implementing its internal quality assurance system:

Assessment of compliance: Partially compliant

R1 - Pursuant to Section 5, Paragraph 2.1 of the Law on Higher Education Institutions, the higher education institution/ college shall ensure continuous improvement, development, and efficient performance of the study field whilst implementing its internal quality assurance system:

Justification: RTU LMA has implemented policies and procedures to ensure the quality of higher education. However, there are challenges with the consistent collection and application of student feedback.

2 1.1 - The higher education institution/ college has established a policy and procedures for assuring the quality of higher education.

Assessment of compliance: Fully compliant

Justification: RTU LMA has implemented policies and procedures to ensure the quality of higher education. However, there are challenges with the consistent collection and application of student feedback.

3 1.2 - A mechanism for the development and internal approval of the study programmes of the higher education institution/ college, as well as the supervision of their performance and periodic inspection thereof has been developed.

Assessment of compliance: Fully compliant

Justification: RTU LMA has clear procedures on how study programmes are being approved and developed. Programme reviews are conducted and incorporated annually. Recent updates include new courses, enhanced infrastructure, and curriculum modernization informed by stakeholder feedback, though clearer prioritisation and tangible links to workforce needs could improve their impact.

4 1.3 - The criteria, conditions, and procedures for the evaluation of students' results, which enable reassurance of the achievement of the intended learning outcomes, have been developed and published.

Assessment of compliance: Fully compliant

Justification: The evaluation of learning outcomes at RTU LMA is governed by regulations that outline formative and summative assessments, rating scales, procedures for appeals, and improving academic performance. Final examinations and thesis requirements are detailed in separate regulations, with specific guidelines developed by each programme's implementing unit and approved by the Faculty Council.

5 1.4 - Internal procedures and mechanisms for assuring the qualifications of the academic staff and the work quality have been developed.

Assessment of compliance: Fully compliant

Justification: RTU regularly assesses the professional advancement needs of academic staff through surveys. The Centre for Academic Excellence (CAE) coordinates professional development strategies, while academic units organise tailored training activities based on identified needs.

6 1.5 - The higher education institution/ college ensures the collection and analysis of the information on the study achievements of the students, employment of the graduates, satisfaction of the students with the study programme, efficiency of the work of the academic staff, the study funds available and the disbursements thereof, as well as the key performance indicators of the higher education institution/ college.

Assessment of compliance: Partially compliant

Justification: RTU LMA collects and analyses data on student academic achievements, graduate employment rates, student satisfaction with the programme, academic staff performance, available study funds and their allocation, and other key performance indicators. However, a notable weakness is the lack of consistent evidence showing how student feedback is integrated into the curriculum and study processes.

7 1.6 - The higher education institution/ college ensures continuous improvement, development, and efficient performance of the study field whilst implementing its quality assurance systems.

Assessment of compliance: Fully compliant

Justification: RTU LMA ensures continuous improvement and development through strict adherence to external industry regulations. Graduates are well-received in the industry and possess the necessary competencies; however, minor adjustments, such as deeper integration of student feedback, could bring further benefit to the implemented RTU LMA programmes.

1.3. Resources and Provision of the Study Field

Analysis

1.3.1.

A system for funding scientific and / or applied research and / or artistic creation is defined and implemented and it is effective. The RTU LMA has assumed three-pillar funding model to ensure alignment the needs of the Latvian economy and labour market, quality, research-based higher education content and performance management in higher education institutions, where Pillar 1 is the base funding for the study process, Pillar 2 is performance funding and Pillar 3 is development funding. (SAR p.40) LMA is independent in RTU structure however this model will probably be modified in the near future due to the fact that LMA is a state academy which has been recently merged with RTU.

Taking into account the information gathered during the onsite visit and from SAR, experts are of the opinion that RTU LMA has a sufficient system for financing of the study field and the corresponding study programmes in place. Namely, according to the SAR p.41, the studies at RTU LMA are provided both within the allocated budget places paid by the state budget and for a fee. The state basic budget financing for RTU LMA is made up of the basic funding of studies corresponding to the list of study programmes and the number of students, which consists of funds for utilities, taxes, maintenance of infrastructure, purchase of inventory and equipment and remuneration of staff, and other costs related to the study process, as well as funding for scientific activities. The number of study places shall be allocated following negotiations with the Ministry of

Education and Science.
The amount of the basic funding for studies is determined on the basis of the number of study places at RTU LMA, as well as the basic cost of a study place as determined by the State and the cost coefficients for studies in thematic areas of education. The cost coefficients of the thematic areas of education are indicators which determine the cost of a study place in a given thematic area of education in relation to the basic cost of a study place. (SAR p.41.-42.)
During the on-site visit it was verified that an analysis of the funding and available resources of the study field is carried out on the regular basis, identifying the current needs and planning the long-term necessary investments. In order to successfully implement it, the regular RTU LMA management meetings are conducted.
Also it's important to highlight that RTU LMA takes part in the various EU project activities to ensure the development of study programmes and study infrastructure.
RTU LMA was also able to obtain some fundings from projects like SAM 8.2.3., for example, activity "Analysis of the content of study programmes, assessment of their relevance to the development needs of the sector" (SAR p. 33). Funding allowed for some improvement of material- technical base for the study programmes such as „Maritime Transport – Navigation", „Maritime Transport – Marine Engineering" and „Maritime Transport – Marine Electrical Automation". However they cannot significantly change the financial situation in LMA. Main problem for LMA is the really small number of students in some programmes whose cost of their education cannot be covered just from fees or state funded places. Merging LMA with RTU might improve the situation, as there is potential opportunity for sharing some operational costs between LMA, maritime school and RTU. This is also a positive aspect since the number of study places is allocated following negotiations with the Ministry of Education and Science. There is a need in the Latvian economy for Electro-Technician Operators (ETO) professionals as it was said during interviews with industry and maritime administration representatives. If LMA would attract more candidates for that profession then straight income from the state would be bigger. Another advantage would be the new system of financial approach which might be introduced for RTU (institutional financing model) where the amount of support would be associated with the number of graduates (as per meeting with management during assessment visit).
A system for funding scientific and applied research is in place. In the SAR p.42, it`s stated that the academy's funding from the state budget envisaged for scientific activities comprises:
1. Funding for the development of scientific activities;
2. Performance funding for the results of ensuring higher education based on research for higher educational establishments and colleges.
The funds held by RTU LMA to ensure the development of scientific activities is used for implementation of research projects, involving students and for ensuring the scientific infrastructure according to prescribed basic directions and tasks stipulated by the RTU Constitution. (SAR p.42.)
RTU LMA still is able to obtain some amount for research. This figure is however very small: 4.983 EUR in 2022 and 14.897 EUR in 2023. While science base funding in amount of EUR 86 861 has been allocated for RTU LMA in 2023.

1.3.2.
During the onsite visit it was verified that the study infrastructure of RTU LMA is located in different places in Riga. For instance, STCW short training courses are conducted at a boat station situated in Daugavgriva, where it is possible to carry out practical activities related to rigging work, lowering/raising the lifeboat, etc. However the main premises including workshops, laboratories and simulator stations are located in the campus of RTU.
Information gathered during onsite meetings with teaching staff and students of the relevant programmes, it was verified that infrastructural resources to fully equip students with necessary competencies mostly are available to students and teaching staff especially for navigation

programmes, while some deficiencies of availability of real equipment for ETO and engineers are visible. The RTU LMA has access to computer classes, an assembly hall, and other rooms, IT systems, IT planning system, distance learning tools like Moodle (as seen and presented during on-site assessment visit). Teaching staff are provided with appropriate workplaces, a teachers' room is provided with workplaces and a restroom. There is also a very good library and a reading room where the students have access to computer workstations, as well as they have an opportunity to print and reproduce study materials, get access to articles and other informative provision. Students indicated also that the sport facilities are fulfilling their needs. The current expert team also considered that the social part where students could relax, eat is very well organised. One of the expert team observations is that RTU LMA lacks even the smallest training ship (fix-unmovable boat station doesn’t ensure that) on which students could have their first maritime experience. It would be essential for STCW students. LMA is encouraged to think about it while planning its future development/strategy. The equipment used within the framework of the bachelor study programme "Maritime Transport-Navigation", as well as the short-cycle and first-cycle study programmes "Navigation" in the area of specialisation include various ship navigation models with visualization and appropriate software etc., GMDSS radio station, NTPro 5000 full mission navigation bridge, ARPA/RADAR with ECDIS and BRM simulator with seven visualization channels and corresponding workstations (monitors, computer equipment, student and instructor workstations with work table and hardware console, the required specialized software with licence), as well as Navi Planner route planner for the development of the qualification project.
The equipment used for the bachelor study programmes "Maritime Transport-Marine Engineering" and "Maritime Transport - Marine Electrical Automation", as well as for the short-cycle and second-cycle study programmes "Marine Engineering" the field of specialisation include laboratory equipment and stands of hydraulics and pneumatics, material crushing and non-crushing testing equipment, machine tools, welding equipment, electronic equipment, automation system equipment (PLC), material testing equipment and thermal systems. (SAR p.46.)
For the successful implementation of study courses, the classrooms and lecture rooms at the disposal of the teaching staff are equipped with the necessary TV, audio, video, computer equipment, as well as specific technical equipment required for the study process according to the specialisation. All computers are connected to a single intranet network, Internet access is provided, and the necessary licences have been purchased for specialised programmes. Wireless internet coverage is provided in all classrooms.
According to SAR p.46, the renewal of material and technical resources is carried out in accordance with procedure P6-7 "Material and Technical Support for the Study Process" and their capacity for use is planned by the programme directors.
After consolidation with RTU, additional opportunities have emerged in the use of RTU infrastructure and material and technical support for the implementation of the study field and the corresponding study programmes. For instance the welding laboratory of RTU now is available for the study process of marine engineers.

1.3.3.
From the interviews with the teaching staff it was verified that the procedure for the improvement and purchase of methodological and informative provisions is in place. In this regard the teaching staff submits a request to the director of the relevant study programme for material and technical resources to be purchased. It was confirmed that all actual needs are mostly satisfied.
According to the SAR p.47, RTU LMA has implemented a system for the improvement and purchase of information provision, which consists of the following documents:
- Procedure Nr.P6-5”The information provision of study process” within the framework of ISO 9001-2015 standard, which regulates the purchase order of information provision;
- Regulation Nr.36, issued by LMA “On the Council of Library of the Maritime Academy of Latvia

(Version -3, approved by the Senate of LMA on 28/12/2020);
- Regulation Nr.48, issued by LMA on 03.03.2014 “On the Council of Library of Maritime Academy of Latvia” (Version-1, approved by the Senate of LMA on 28.12.2020.)
The library of LMA is a part of the centralised RTU library. It provides study and reference literature, access to databases and periodicals, services for students and academic staff - computer workstations for daily study, copying, printing, etc. The library collection is compiled in accordance with the study programmes of RTU LMA, which are based on the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW). Total number of documents (physical items) in the University library is 27,757, including 25,016 books, 35 electronic documents, 18 audiovisual documents, 914 unpublished resources (SAR p. 47). During the experts visit it was verified that the latest versions of all relevant International Conventions and Codes (for instance, MARPOL Convention, SOLAS Convention and ISM Code) are available for students and teaching staff.

1.3.4.
During the on-site visit it was verified that students and teaching staff of RTU LMA have a wide opportunity to use the different communication technology tools.
For instance, taking into account information provided in SAR p.50, the Centralised Study Management System is used for efficient administration of the study process, which ensures digital provision of the study life cycle, incl. Electronic Register of Study Programmes (its public part is available at https://stud.rtu.lv/rtu/vaaApp/sprpub), drawing up learning agreements and enrolment of students in study programmes, Register of Study Courses (its public part is available at https://stud.rtu.lv/rtu/discpub/list?english=true), designing student’s individual study plans, drawing up orders, implementing study courses and study process, registering grades, recognizing study courses, awarding qualifications, administering payments, hostel information, gathering information to issue diploma supplements, etc. This system is one of the main cornerstones in the administration of the RTU study process.
RTU LMA has developed quite comprehensive interactive e-learning environment platform https://omars.latja.lv/login/index.php, based on the Moodle platform, despite the fact that there are no distance learning programmes at RTU LMA. Each full time and part time student is provided with a personal identification username and password to access the interactive system. In the OMARS (online maritime system) all relevant information was initially prepared manually (study courses, groups, access rights, etc.). This system ensures student-teacher communication during the study process. Teaching staff place various electronic materials, mid-term tests, homework, information on the progress of a particular course, etc. in this system.
According to the SAR p.50-51, full accessibility of the content of the programmes in the e-learning environment OMARS is provided. RTU LMA is continuously working on the development of the interactive e-learning platform, lecturers are developing new study materials and activities, as well as adapting the existing ones for remote work with students.
At the moment, there are no distance learning studies at RTU LMA.

1.3.5.
During the onsite visit it was verified that the principles and procedures for attracting qualified teaching staff are described in the internal regulations of RTU LMA and QMS. For instance, the basic criteria for the election of the university's academic staff is determined in the annex to the law "On the Constitution of the Latvian Maritime Academy".
From SAR p.53 comes out that the basic requirements for applicants for academic positions are - a person who has a doctorate degree and at least three years of work experience as an associate professor or professor in a higher education institution can be elected to the position of professor in an open competition. A person with a doctorate degree can be elected to the position of associate

professor in an open competition. The council of professors of the branch submits the results of the election of the professor or associate professor, the decision on the election of a person to the position of professor or associate professor and the evaluation of the elected person to the rector.
RTU LMA carries out an annual assessment of the continuing professional development of its academic staff in accordance with the relevant procedures. For the evaluation, the staff submit reports within the framework of the Individual Plan Performance Review and the evaluation is carried out by the Vice-Rector for Studies and Sciences, as well as heads of departments. Based on the results of the annual qualification assessment, further guidelines for the activities of academic staff are determined, including the individual's development expectations and needs for the next period; directions for the renewal of the academic staff of RTU LMA; directions for attracting foreign academic staff to RTU LMA; directions for internships for the next period. The information obtained is used for the preparation of the annual staff development plan and the annual report of the management of the Academy. Following the development of an incentive-based remuneration policy for RTU LMA, the results of the annual qualification assessment will also be used for individual staff remuneration reviews. (SAR p. 53.-57.)
The implementation of RTU LMA personnel policy is stipulated in the Human Resources Development Plan, which focuses on three main goals within the professional development of the academic staff: renewal of the academic staff, by promoting academic work of Doctoral students, improvement of the professional competence of the existing academic staff and attraction of foreign academic staff. The action plan sets out, for each goal, the activities and sub-activities to be carried out, defines the results to be achieved, the responsible organisational units and the implementation schedule. (SAR p.55.)
In teaching of STCW study courses, RTU LMA involves/invites professionals - active seafarers and ships` officers, involved in merchant shipping internationally, providing students with the most up-to-date information on the development trends in the field, acquaint them with the real working environment and also with the topical problematic issues. Interviews with students confirmed that they value such professionals highly and develop confidence and understanding of the application of the skills and knowledge acquired in RTU LMA. (SAR p. 53.-57.) The experts are of the opinion that teaching staff involved in the study process is appropriately qualified and the procedures in place for attracting them are efficient.

1.3.6.
Taking into account information provided within the SAR (p.38), RTU LMA has developed a unified system for staff planning, selection, evaluation of staff suitability and satisfaction, which is described in LMA procedure P2-1 „Personnel Management”. The LMA procedure P2-2 "Organisation of Teachers' Work" defines the procedure for planning and supervising individual work, monitoring and ensuring teachers' qualifications and ensuring teachers' professional competence. Individual work plans for teaching staff were introduced, which were drawn up at the beginning of the academic year by the directors of study programmes in cooperation with the teaching staff and approved for each teaching staff member. At the same time, the procedure for evaluating the performance indicators of the teaching staff has been established. The evaluation criteria include the following sections: pedagogical competence, scientific competence and organisational competence.
Taking into account that RTU LMA provides qualifications for internationally regulated maritime professions, RTU LMA also assesses the professional qualifications of lecturers in the field of professional specialisation - e.g. the existence of an instructor-assessor certificate issued by the institution supervising the study process, i.e. Registry of Seamen of the Maritime Administration of Latvia. The instructor-assessor certificate certifies the right of the instructor to teach the study courses as per the STCW convention. (SAR p.58.)

1.3.7.

Analysis of academic, research and administrative workload of the teaching staff mostly is based on the interviews with the relevant staff. Namely, interviews with teaching staff confirmed that the workload includes also the development and updating study courses, providing lectures, consultations, exams and tests organising, as well as research work and participation in the different projects` activities. Overall workload of the academic staff is balanced to ensure the quality of the study process. At RTU LMA, there is no strict separation of academic and research workload, the proportion of each member of academic staff is determined individually by planning the staff member's workload in the department, taking into account their position, involvement in projects, professional competences and experience. (SAR p.61.)
However it is important to highlight the high workload of the director of RTU LMA, at the same time he is director, deputy director and the director of two study programmes offered by the RTU LMA.

1.3.8.
According to SAR pp. 62.-65. It is evident that the RTU LMA has identified all necessary support for students. Namely, the support systems available to RTU LMA students are developed in several directions: informative, methodological and financial support, career support, support for foreigners, etc.
Interviews with students and programme directors confirmed that regular meetings are organized for all students (incl. students from abroad and part-time students) with the programme directors in person or online, as necessary, to inform them about the content of the study programmes, the objectives and the learning outcomes to be achieved, as well as to describe the study process, the principles of organising shipboard practice and other topical issues. The necessary information support is also provided to students by the LMA staff involved in the provision of the study process.
Methodological support for students is provided in person, by offering the resources of the RTU LMA Study Centre (final paper samples submitted in previous years, methodological materials prepared by RTU LMA lecturers, possibilities of copying study materials, etc.), as well as by placing the necessary support materials in the e-study environment (platform https://omars.latja.lv, RTU LMA intranet L:\Students).
Financial support includes:
- 100% discount for orphans to stay in RTU LMA dormitory;
- 75% tuition fee discount during shipboard practice;
- 70% tuition fee discount during shipboard practice for visiting students (course attendees);
- 100% tuition fee discount when studying abroad or at a partner university in Latvia;
- 70% tuition fee discount for part-time students who are employed full-time at RTU LMA;
- 40% tuition fee reduction for part-time students who are employed part-time at RTU LMA
Support is also provided to potential students of RTU LMA. Meetings are organised in schools to inform potential students about the study programmes offered and the employment opportunities after graduation. Information (“open doors”) days are organised in person or online, shadowing and career days, as well as a competition for secondary school students "ENKURS" are just some of the means used to promote the maritime industry.
In addition it’s important to highlight that there are no students with special needs in the maritime programmes offered by RTU LMA.

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions :
Resources and Provision of the Study Field mostly are sufficient and ensure the achievement of the objectives and planned results of the study programmes. It is important to highlight that experts are of the common opinion that the study infrastructure, namely, main premises of RTU LMA leaves a very positive impression.

However when it comes to specific equipment required for the implementation of the study programmes “Maritime Transport - Marine engineer” and “Maritime Transport - Marine Electrical Automation”, there is still room for slight improvements regarding the equipment for practical training.

Strengths:
1. A significant part of teaching staff comes from the industry and are active seafarers.
2. The study environment, facilities, and infrastructure are state-of-the-art, reflecting a high standard of quality.

Weaknesses:
1. Not all relevant equipment essential for achievement of the areas of knowledge, understanding and proficiency required by the STCW convention for the practical part of the study programmes “Maritime Transport - Marine engineer” and “Maritime Transport - Marine Electrical Automation” is available at LMA premises. Nevertheless, in most of the cases this is compensated by a well described onboard training programme.
2. Full details of the provision for continuous professional development opportunities for staff is not well-defined in the context of the RTU LMA merger.

1.4. Scientific Research and Artistic Creation

Analysis

1.4.1.
Research at RTU LMA is in line with the objectives of the fields of study concerned, which is providing sustainable, multi-level, high-quality and globally recognized higher professional maritime education, as also developing multidisciplinary and sustainable research. It is possible to realise this as RTU LMA provides professional maritime education, starting with basic studies and ending with the doctoral study programme. In accordance with the Statutes of RTU LMA, the aim of the activities of LMA is to ensure quality studies for higher education and professional qualification in the maritime sector and scientific research in the maritime sector in compliance with the laws and regulations of the Republic of Latvia and international laws (SAR, 2.1. Management of the Study Field, 2.1.1.) Based on SAR (2.4. Scientific Research and Artistic Creation), RTU LMA research specialisation at all levels and in all fields fully corresponds to the Latvian RIS3 priority direction "Smart materials, technologies and engineering systems” and research area "Mechanical and Metal Working, Thermal Power Engineering, Heat Engineering and Machinery" is also closely linked to the smart specialisation area "Smart Materials, Technologies and Engineering Systems".
RTU LMA research areas include such topics as Baltic shipping history, Maritime education and human factors affecting transport safety, Autonomous ships, Digital shipping and cybersecurity, Smart ports. Structurally, research at RTU LMA is organised into horizontal and vertical research platforms, from which the Academy's detailed research areas emerge. Currently RTU LMA participates in research on cybersecurity issues and is included in „Network of competence centres and the European Cybersecurity Research and Competence Centre /Council of the EU”.
Overall, the long-term goal of RTU LMA is to become the leading R&D centre in the Baltic States for the sub-sector "Maritime Transport and Infrastructure" (SAR, 2.4. Scientific Research and Artistic Creation, 2.4.1.) and to achieve this goal RTU LMA is continuously strengthening its research capacity by attracting new partners, implementing international research projects and increasing the number of scientific publications.

1.4.2.
Scientific research is linked to the study process at RTU LMA and the results of research work are

used in the study process, for example in the study course of „History of Latvian Shipping” and study course "Maritime Innovations". It allows students to learn how to write scientific articles, as well as to get to know various innovations introduced in the industry. Besides, the Innovation Grant project implemented by LMA (2019-2023), gives students the opportunity to get involved in the development of innovation ideas based on the Research topics defined in the Research Directions of RTU LMA (SAR, 2.4. Scientific Research and Artistic Creation, 2.4.3.). This allows students not only to learn how to present their research results, but also to form cooperation with students of foreign universities.
The scientific activities of RTU LMA students are also related to the selection of the topics of diploma theses, which are based on LMA Research directions with an emphasis on industry problems identified in practice. At the same time, integration at RTU could allow students to expand the range of these topics, as it opens up the opportunity to use the scientific potential at RTUs disposal - professors, laboratories, etc.
Despite the fact that various applications for scientific projects are being prepared, in which students are also involved, for example, Latvian Science Council project no. Lzp-2019/1-0478, the number of these projects is not large. However, RTU LMA's determination to attract young undergraduate and graduate students to working groups with RTU LMA professors and researchers for the development of research directions is sufficiently high (SAR, 2.4. Scientific Research and Artistic Creation, 2.4.2.). In addition to that, establishing the traditions of open access laboratories could promote student involvement in research activities and could be one of the solutions for achieving this goal. In the near future this would be possible by getting involved in the implementation of RTU and LMA consolidation grant projects, when they will be received. This could help secure additional investments in the study field in the future, particularly as grant appropriation is currently under development, as discussed during the management meeting. Besides that, students can present the obtained research results at the annual conferences organised by RTU LMA, the organisation of which is planned to be actively continued (SAR, 2.4. Scientific Research and Artistic Creation, 2.4.2.).

1.4.3.
RTU LMA forms cooperation with various foreign institutions, mainly in case of ERASMUS projects, which is confirmed by the sufficiently wide number of agreements. At the same time, the number of research-oriented projects was not large and at the time of joining RTU - LMA implemented 6 scientific-oriented projects, 2 of which were Postdoctoral grants. The best example of international cooperation is a project that meets modern trends is project SEANICE "Solutions to detect, identify, counter and protect against mobile manned, unmanned or autonomous underwater systems (including those operating at very high depths)", where LMA have tested prototypes of anti-submarine warfare technologies to address future threats to the European Navy. The SEANICE project team consisted of 16 partners from 6 EU countries - France, Spain, Italy, Portugal, Belgium and Latvia, where selected professionals from both the research and transport industries (SAR, 2.4. Scientific Research and Artistic Creation, 2.4.3.) .
The study programmes and scientific activity in them are gradually being developed, but the international recognition could be wider. The involvement of international partners in various studies could help LMA to improve its scientific activities and improve indicators, for example, in competitions for fundamental and applied projects, where growth opportunities in LMA would be much needed (2.4. Scientific Research and Artistic Creation – Annex). This is especially important if RTU LMA wants to realise the long-term strategic goal in terms of cooperation and internationalisation to become an internationally recognised centre for maritime education and development in the Baltics and Eastern Europe.
In overall, LMA has high potential to improve scientific indicators in the nearest future using LMA and RTU consolidation grants, which are expected to implement 9 research projects, 3 research grants, 5

post-doctoral grants, the aim of which is to raise the scientific capacity of LMA's elected scientific and academic staff.

1.4.4.

As per the requirement of RTU, the academic staff must also be actively involved in research work, which is re-evaluated every six years. The criteria of scientific activity are determined by the Decision of RTU Senate No. 649 “On approval of the RTU Regulations “On the Procedure for Election of a Candidate for the Position of Professor or Associate Professor and the Procedure for Assessing the Qualification of an Existing Professor or Associate Professor” in a new edition” as of 26 April 2021. The performance of the academic staff affects the funding that the faculty or unit receives from the performance fund, which provides support for various research-related activities, such as maintaining research equipment, attending conferences, publishing scientific journals, etc. Such an approach allows the academic staff to receive remuneration according to their scientific activities, as well as, if necessary, to use the fund's opportunities for publishing publications and attending conferences.

Besides that, six research platforms in the main strategic research areas of RTU were established in 2013, which have the Research Programme annual action plan and dedicated funding from the Research Support Fund. Internal project calls within the platforms are organised every year, allocating 90–120 thousands EUR in total to six projects selected on a competitive basis.

In overall, efficiency of these mechanisms can be illustrated by growth of SCOPUS indexed publications, where the total number of the publications increased from approximately 440 publications per year in 2013 to 879 in 2021. At the same time, the number of publications by LMA lecturers is relatively small.

At the same time, in the period from 2012 to 2022, out of 70 LMA teaching staff, 43 have no publications, and 38 have not participated in any conferences (2.4. Scientific Research and Artistic Creation – Publications-Patents-Conferences ENG v2.zip). Also, not everyone actively participates in projects, which could be related to additional workload of teaching staff in other jobs related to basic specialisation. At the same time staff activities in the industry gives students the opportunity to get knowledge on the latest innovations.

1.4.5.

Students are involved in science, but there is room for growth in case of the number of projects developed by RTU LMA. At the same time RTU LMA develops mechanisms for involving students in research activities, especially in improving the activities of the master's programme and providing career opportunities for young scientists during the doctoral period. An internal research excellence scholarship for young scientists has been established, as well as internal research excellence, a new initiative providing 270,000 EUR over a 3-year period, which allows young and talented researchers to create their own research groups and build a research career at RTU.

Besides that, internal project competitions provide additional funding for publishing opportunities in SCOPUS / WoS-indexed journals and Research Support Fund (10% of the research base funding is allocated to this fund) provides support to other activities: attending conferences, publishing papers and thesis, etc (SAR, 2.4. Scientific Research and Artistic Creation, 2.4.5.).

Other scientific activities are also successfully implemented, for example, the RTU Science and Innovation Center's Design Factory in cooperation with researchers from the Georgia Institute of Technology (USA) implements the study course "Vertically Integrated Project" (VIP), during which interdisciplinary student teams under the guidance of experienced researchers develop a challenging long-term research project. Likewise, the RTU Science and Innovation Center makes a significant contribution to the involvement of students in science by implementing the innovation and knowledge transfer process, where more than 1,000 RTU students and 300 students from other universities participate every year.

Although RTU LMA academic staff are elected to both academic and scientific positions and have the opportunity to be maximally involved in the implementation of scientific projects and writing new project applications, the number of students involved in the projects, especially master's students, is small, which is also confirmed by interviews.
Overall, RTU LMA students have a wide variety of opportunities to engage in scientific activities, starting with Student Scientific Conferences and ending with various types of projects.

1.4.6.
RTU LMA is working on the implementation of innovative solutions that can positively affect the study process. Basically, these solutions are related to various projects and summer schools, which allow students to develop communication skills and implement various innovative ideas. The best example is the project "Innovation grants for students" (2019-2023), where as a result of the innovation competition, students from various universities received 82 scholarships, while during the practical lessons they learned project preparation skills and defended their ideas before the competition jury. It not only allows students to develop their ideas, but also prepares them for participation in various innovation hackathons: CrisisLab, Icebreaker, City to Sea, etc. (SAR, 2.4. Scientific Research and Artistic Creation, 2.4.6.). For example, in one such hackathon, the participants of "City to Sea" developed ideas that could potentially lead to new globally demanded technologies and solutions in the fields of aquaculture and mobility. On the other hand, the team "N-LAB/Wise river" won the "Greatest progress within the hackathon" nomination (LMA nomination), presenting the idea of an unmanned water vehicle.
A similar example is the first online hackathon "HACK DigitalSea'21" in the Baltics, where participants sought innovative solutions to the challenges of sustainable aquaculture in the Baltic Sea and during two days teams validated their solutions, improved business models and consulted with 23 industry representatives, experts and business mentors from all three Baltic States (SAR, 2.4. Scientific Research and Artistic Creation, 2.4.6.).
Also, the summer school SMART SEA 2022 organised by LMA for young people from LMA, LMA Maritime College, Liepāja Maritime College, Riga Technical University, students of other universities and other learners (primary and high school students) can also be added to the measures promoting innovation. This type of event with mentors and industry experts allowed us to get a closer look on the maritime industry, form cooperation with other educational institutions, as well as to provide information about study opportunities.
In general, innovative solutions are actively sought and are successfully introduced and developed, only an opportunity for more active involvement of students in these events should be found.

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:
In general, the involvement of RTU LMA in the development of the science and research field in the specific field of study is obvious, but could be more intensive. The relevance of research in the field of study to the goals of RTU LMA and industry is also obvious. Therefore all the above shows this connection between the study process and science. International cooperation in the current phase is satisfactory but should be further developed in the future, especially now, being part of RTU and using access to its scientific potential. RTU LMA has developed various mechanisms for staff involvement in scientific activities, and main results are shown by significant increase in the number of publications, but mechanisms must be found to involve also LMA staff whose scientific activities are insignificant and not reflected in the form of publications and projects. Besides that, there is no even involvement in projects for all staff and therefore efforts should be made to encourage the involvement of less active staff in projects. RTU LMA has developed appropriate mechanisms for the involvement of students in scientific activities, but mechanisms must be found to increase the

number of students participating in these scientific activities.

Strengths:
1. Strong scientific potential and opportunities within RTU.
2. Performance fund, which provides support for various research-related activities.
3. Many different mechanisms for involving students in research activities.

Weaknesses:
1. Not all staff is involved in research and scientific work or projects, therefore efforts should be made to encourage the involvement of less active employees.
2. The number of students involved in scientific activities is small, which is reflected by the small number of publications by LMA lecturers. Therefore their involvement in various activities should be encouraged, taking into account the range of support mechanisms offered by RTU LMA.

Assessment of the requirement [2]

1 R2 - Compliance of scientific research and artistic creation with the level of development of scientific research and artistic creation (if applicable)

Assessment of compliance: Fully compliant

Justification: RTU LMA has sufficient scientific and technical potential for successful further development of the given directions.

1.5. Cooperation and Internationalisation

Analysis

1.5.1.
A commendable number of specific links and partnerships with non-government organisations, and others, within the maritime sector have been established (see SAR p. 79). These links with companies such as the Baltic Group International, the Anglo Eastern (UK) Ltd and others present at the meeting, should provide RTU LMA with the promotional opportunities it needs and seeks. They should also provide students with the opportunity for shipboard practice experience, thus meeting the requisite learning outcomes necessary for employment in the maritime sector. Consequently, and where appropriate, RTU LMA students are provided with work experience on board ships from a range of chosen local and international shipping companies (see SAR p. 79). A particular strength here is the intention of RTU LMA to maintain a meaningful dialogue with these companies regarding course content and development, as well as supporting individual student progress and competence acquisition. However, where feedback on student performance is mandated, then this should also include feedback from students. This aspect requires further development going forward. The industry connection described here is an important one which must be more fully developed to gain maximum effect.
With regards to the promotion of RTU LMA, programmes of study and agreements with other Latvian institutions have been set up e.g. with the Liepaja Maritime College and the Novikontas Maritime College . This cooperation with other Latvian Higher Educational Institutions is well-developed, as one would expect from an institution (RTU) with a good international reputation. A number of suitable instruments for cooperation have been established to promote innovation and extension. Similarly, good cooperation with local schools, to promote the maritime industry, is evident. This participation at the “grass roots” level is commendable. The merging of LMA with RTU extends this further due to the inclusion of the Maritime School as part of the RTU LMA portfolio.

1.5.2.
Accreditation is an accepted and rigorous process that commands respect internationally. In this context a good strategic approach has been applied here with good engagement with a number of international agencies evident, for example the International Maritime organisation (IMO) (https://www.imo.org/), the European Maritime Safety Agency (EMSA) https://www.emsa.europa.eu/) and others. In addition, excellent links with some international, and mainly local (see Table SAR p.79), shipping companies and employers have been established. This cooperation bodes well for a successful, globally aware, professional student output. It should also boost student recruitment to the institution. Further development of these important activities is strongly recommended. The institution should consider further alignment of all professional maritime engineering programmes with the European Network for Accreditation of Engineering Education (ENAEE) EUR-ACE® framework (http://www.enaee.eu/). This will further promote these programmes in Europe and will demonstrate the excellent international standing of their maritime engineering degree programmes. In addition, consideration should also be given to seeking recognition from the International Engineering Alliance (www.ieagreements.org). This is a partnership of international organisations that are signatories to a number of international engineering education accords.
The RTU LMA internationalisation and cooperation goals are acknowledged and enshrined in the RTU Strategy (2023-2027). This bodes well for all future activities. (https://www.rtu.lv/writable/public_files/RTU_rtu_strategy_2027_eng.pdf).

1.5.3.
The system and procedures for attracting teaching staff and students from abroad to this study field is a developing activity with a range of promotion and marketing tools being used to beneficial effect. A good example of these activities is the local maritime industry competition for secondary school students referred to as “Anchor”(SAR p. 81). A number of attractive English language courses have also been developed (SAR p.86). Coupled with LMA’s established professional reputation these should appeal to the competitive international market. To further assist with this aspiration the RTU LMA website is now also available in English (SAR p. 86). However, in spite of appearances given by SAR, the number of the international students enrolled in the students is rather small. This should be an important point of interest for those who manage the programmes of the study field. In addition, provision for additional professional development opportunities for teaching staff in this respect is required.
It is clear from the documentation provided (SAR pp.82-85), and the interviews conducted, that the management of courses, and international cooperation activities in this field of study has been well-considered. It is suggested, since there is no mention of this in the SAR, it is suggested that there is a need here for a clearly identifiable designated “champion” to promote and manage these activities more widely. This will ensure the effectiveness of this vital income generating activity. Additionally, work is also required to provide essential student welfare support.
According to annex (“P18_Staff.mobility.docx”_ Between 2013 and 2023, an average of nine RTU LMA lecturers participated annually in ERASMUS+ teaching mobility, while RTU LMA hosted an average of 5.6 guest lecturers per year through the ERASMUS+ program. In accordance with annex (“Studējošo mobilitāte_ENG v4.docx”) between the academic years 2013/14 and 2022/23, 155 LMA students participated in ERASMUS study mobility, including two master students and four bachelor students (three from the Marine Engineering programme and one from the Navigation programmes). Most participants were from the Ports and Shipping Management programme, which includes a semester at a partner university. Additionally, an average of 23.3 students per year engaged in ERASMUS internship mobility, with participation exceeding 30 students annually during 2021/22 and 2022/23, reflecting a growing trend. On the incoming side, 221 exchange students from 25 partner universities in 14 countries studied at RTU LMA during the same period, averaging 22 students per year or approximately 3.15% of RTU LMA’s total student body (assuming an annual average of 700

students). Incoming students are provided with the same study and living conditions as local students, including dormitory accommodation and participation in cultural events. The selection of study programmes by foreign students has shown varying dynamics over the years. During the assessment visit, students highlighted that the exchange opportunities significantly enhanced their studies and education. Consequently, it is important to note that both incoming and outgoing exchange activities are at relatively strong levels.

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:
Experts can confirm that the underpinning professional, and international facing maritime focus of the LMA RTU programmes has been designed to meet the specific needs of STCW (Convention on Standards of Training, Certification, and Watchkeeping) and the IMO (International Maritime Organisation). The programmes are also in keeping with the appropriate levels of the Framework for Qualifications (EQF) in the European Higher Education Area. Taken in this context they fully contribute to the achievement of the aims and learning outcomes of the study field and will be attractive to both the international student market and staff alike.

Strengths:
1. The merger of LMA with RTU has provided the University (RTU) with the equipment to deliver all required STCW professional courses (including safety training). This resource could provide excellent income generation opportunities.
2. The LMA has an established reputation within Latvia as the premier Maritime Training Academy. This reputation must not be lost as the merger with RTU matures. It is a particular strength that could be exploited to recruit international maritime students. In addition, RTU is recognised as the most recommended university by employers in Latvia. This combined reputation will provide the merged institution with a great opportunity for international recruitment. This opportunity must be exploited as fully as possible as the RTU LMA merger matures.
3. The mobility of both teaching staff and students, in terms of outgoing and incoming participants, is at a relatively strong level.

Weaknesses:
1. Mechanisms and institution tools to monitor student wellbeing, particularly international students, are not clear.

Assessment of the requirement [3]

1 R3 - The cooperation implemented within the study field with various Latvian and foreign organizations ensures the achievement of the aims of the study field.

Assessment of compliance: Fully compliant

Justification: The overarching design of all programmes and the intended future programme development initiatives are well thought out and are fully consistent with the stated aims of the merged institutions, and the professional bodies concerned. The compulsory professional STCW safety and firefighting courses available are an excellent resource for further international cooperation activities. They are also a good indicator of a strong professional programme. In addition, and as detailed in other parts of this review, the use of returning experienced seafaring alumni, with recent up-to-date industry knowledge, to teach current students is beneficial to the students professional development. It should also help to promote, and develop, the merged institutions reputation on the international stage.

1.6. Implementation of the Recommendations Received During the Previous Assessment Procedures

Analysis

The previous assessment conducted in May 2012 made six expert recommendations (SAR pp. 89-90) with regards to the field of Mechanics and Metal Working. These are dealt with in order as follows;

1. “More attention must be paid to the quality management in the Academy as well as to the implementation of the latest Manila amendments to the STCW Convention”.

The new combined LMA RTU Quality Management and Assurance structure, based on student feedback, which have been merged effectively is a particular strength. This ongoing process bodes well for the future development of well administered, attractive state-of-the-art courses and programmes.With regards the requested implementation of the STCW Manila amendments it is not clear in the documentation that this has been carried out. Additional statements pertaining to the Manila amendments are needed to confirm compliance. However, a recent inspection carried out by the Latvian Registry of Seafarers (13/3/2024) has confirmed full compliance.

2. “The Academy should be more active in receiving financial assistance, especially from European programmes”.

For this requirement the activity at RTU LMA, although currently sufficient, remains “a work in progress.” LMA has had some success since 2018, but receipt of financial assistance remains variable, and where available, is obtained in competition with other institutions. The merger of RTU and LMA should provide some excellent opportunities to pursue alternative funding streams.

3. “The Academy should be more open to the corporate goals of industry organisations to align the study process with the needs of industry”.

Clear evidence has been presented within the documentation, and during interviews with alumni and employers, that this requirement has been pursued to advantageous effect, as detailed in later sections of the current assessment.

4. “Create & develop a modern learning environment, including modern technologies”.

Clear evidence has been presented that this requirement has been met with significant improvement and expansion of the use of innovative e-learning technologies and the digitisation of the study content and online study. With the merger of LMA and RTU significant improvement has been demonstrated.

5. “Step up efforts in the modernisation and refurbishment of specialised STCW maritime training equipment and improve technical equipment available”.

Recent additional work in this respect has now been completed to rectify these concerns and all equipment is fully compliant. Initially this remained a “work in progress” to fully concerns raised by the Latvian Registry of Seafarers. They stated recently (13/3/2024) that “The Academy still needs to improve the electrotechnical workshops and laboratory equipment”.

6. “The experts would like to encourage the academy to make greater efforts in the development of research equipment”.

Evidence for the progress made in this regard has been presented as an annex to the main documentation. As with other concerns raised, this remains an ongoing development activity.

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:

It is confirmed that, where this has been possible, all of the recommendations from the previous evaluation have been implemented to good effect. However, the process of full implementation has been slightly hampered by the recent merger of LMA with RTU. On the positive side however the merger process has produced a number of positive opportunities, as described below.

Strengths:
1. The combined LMA RTU Quality Management and Assurance structure, based on student feedback, is a particular strength, although some weakness exists when integrating student feedback into the curriculum. This ongoing process bodes well for the future development of well administered, attractive state-of-the-art courses and programmes.
2. Recent full compliance with the Latvian Registry of Seamen professional requirements, ensuring that international STCW requirements for undergraduate programmes are met, is also a particular strength. The delivery of STCW and Safety training could provide an excellent opportunity for income generation activities.

Weaknesses:
1. Programme and equipment funding remains an ongoing issue for the recently merged institutions, particularly with regards to refurbishment issues.
2. International outreach and recruitment is not yet fully effective. The development of an effective international advertising and recruitment strategy is required.

Assessment of the requirement [4]

1 R4 - Elimination of deficiencies and shortcomings identified in the previous assessment of the study field, if any, or implementation of the recommendations provided.

Assessment of compliance: Fully compliant

Justification: The full merger of RTU with LMA has been implemented and the majority of the deficiencies highlighted previously have now been corrected. The merged institution maintains a fully effective certified quality management system compliant with ISO 9001. This strengthening of programme quality assurance processes, together with industry acceptance of the delivery of the professional aspects of the programmes, and the developing international recognition of programmes, will ensure their robust continuity in the future.

1.7. Recommendations for the Study Field

Short-term recommendations

- Programmes must include the development of a number of important “soft” management skills such as communication, leadership, conflict resolution and adaptability.
- Sustainability within the maritime profession is also an ongoing issue of concern for the profession. The institution must continue the good work they are currently doing with regards this issue.
- Look for new ways to give feedback to the students and employers about the implementation of their feedback.
- Inform students more detailed about the scientific work possibilities provided by RTU LMA.
- Inform graduates about how they can contribute further to the RTU LMA.
- RTU LMA should adopt the content of the study programmes to the technical developments and the newest tendencies in the industry, for instance, autonomous technologies and alternative fuels.

Long-term recommendations

- RTU LMA management and programme directors should regularly monitor the number and quality of teaching staffs' publications looking for appropriate mechanisms to encourage an increase in the number of publications when conventional incentive mechanisms do not work.
- RTU LMA should provide staff with as much information as possible about participation in various projects, their benefits, financial opportunities, as well as, as far as possible, provide advice on successful project writing and documentation preparation.
- Develop a strategy to attract new students to the study programmes.
- Develop a strategy to attract more international students and researchers.
- Define full details of management responsibilities and roles and the provision of continuous professional development opportunities for staff in the context of the RTU LMA merger.
- RTU LMA must embed the United Nations Sustainable Development Goals and guidance within programs where this can be done and is appropriate. (https://sdgs.un.org/topics/oceans-and-seas). In particular sustainability in programme design and delivery.
- In the context of best practice RTU LMA must promote equality, diversity and inclusion in line with applicable national regulatory frameworks, as well as embedding inclusive design within the curriculum where this is relevant.
- The institution must recognise that the IMO has started work on a comprehensive review of the STCW Convention and Code. https://www.imo.org/en/MediaCentre/MeetingSummaries/Pages/HTW-Default.aspx.
- Since the SAR fails to provide factual data to prove the compatibility of the LMA quality standards with the ESG provisions of ENQA, the evaluation team recommended a fully suitable alignment between the two evaluation standards.

II - "Navigation" ASSESSMENT

II - "Navigation" ASSESSMENT

2.1. Indicators Describing the Study Programme

Analysis

2.1.1.
From the programme documentation provided, and the interview conducted with the Programme Director, it is very clear that this Navigation programme (41525) has been suitably benchmarked against Latvian Educational (SAR p.98) requirements and also closely aligns with STCW-78 (SAR p.102-103) and the Framework for Qualifications in the European Higher Education Area (EQF). There is clear evidence provided throughout the programme documentation of a good training needs analysis having been conducted in an effective manner. This strongly demonstrates good compliance with the navigation and seafaring context. This is apparent in the renaming of the titles of a good number of courses which have been developed, and in the comprehensive statement of the learning outcome in the programme documentation. A particular strength here is the regard paid to the delivery of STCW requirements with the incorporation of the essential Manila Amendments (SAR p.169). Study programme complies with the study field of "Seafaring".

2.1.2.
Study programme code is 41525 wherein 41 corresponds to first level higher education and 525

corresponds to “Mechanical Sciences (Motor Vehicles, Ships and Aircraft)” (Cabinet Regulation No. 322 “Noteikumi par Latvijas izglītības klasifikāciju”). However, it must be noted that this is the only programme in the field of study providing education at the 5th qualification level. In accordance with regulatory enactments, another code could be relevant in this case: “840 - Transport Services.”It can be argued that the given qualification does not fundamentally emphasize engineering skills. Instead, it focuses on basic operational competencies and a general understanding of technical aspects. Therefore, it may be worthwhile to reconsider the assigned code, as the learning outcomes do not align with those typically required for engineering graduates. This suggests that a code more relevant to engineering science may not be appropriate. Qualification to be obtained at the successful graduation is “Navigator (operating level)”, it must be noted that to obtain qualification, a student must meet all the requirements of the study programme. If the student scores below 7 points on the final exam, they can still earn the qualification by retaking the exam and discussing their results with inspectors from the Latvian Maritime Administration. (SAR p. 102). Admission criteria includes a valid medical certificate issued by a maritime doctor confirming fitness for work on a ship as mandated by Latvian regulatory enactments. For admission to the 180 ECTS programme, applicants must have a secondary education diploma. For the 120 ECTS programme, applicants need vocational education and a 4th-level professional qualification in navigation or equivalent. CE considered are Latvian language, foreign language and mathematics. State-funded places are only available for students who graduated from the RTU LMA Maritime School. The admission procedure and requirements for part-time studies were regulated by the same procedure, regulations and rules as mentioned in the description for full-time studies, as well as by Regulation No. 16 of 29 March 2004 "On part-time studies at Latvian Maritime Academy". On the basis of the decision of the Admissions Committee, within the deadline set by the Admissions Committee, applicants sign a contract for studies in the chosen part time study programme at LMA and are matriculated by the Rector's order.
The title of this short-cycle professional Navigation higher education study programme is entirely appropriate and clearly defines its intent to educate and train competent and professional navigators to an operating level. A number of different programme delivery formats currently used allows students to study the programme, in the Latvian language, full-time over 2 or 3 years or part-time over 3 or 4 years (SAR pp.95-97). This delivery pattern offers excellent study flexibility. However, it is suggested that careful management of these flexible study modes is essential to prevent potential programme completion delays, and to ensure good student retention and completion. In addition, the programme documentation fully describes, in sufficient detail, the many course refinements made for the effective development of the professional competency of “Seafaring” navigators. Courses studied are both mandatory and industry specific (SAR pp. 99-100) in nature. Although not taught in English, the programme assessment strategy ensures a good level of competency in this respect by the inclusion of a State Examination in Maritime English. In addition, the programme, as stated earlier, is fully compliant with the level 5 requirements of the EQF. The study programme’s title (Navigation 41525) professional qualification, objectives and admission requirements are all interconnected and fully justified.

2.1.3.
Fully justified developmental changes have been made to the programme aims and objectives, by way of modified credit point allocation. This is well described in the strengthening changes related directly to meeting the specified mission and vision of the Latvian authorities (SAR p.101) aimed at developing an effective and competitive maritime workforce. In addition, the evidence that a good training needs analysis was conducted in a professional maritime context indicates the clear professional intent of the programme (SAR pp.105-107). These are fully effective with regards to meeting the requirements of STCW, allowing graduates to obtain the professional competency certificates of the Latvian Maritime Administration's Seafarers Register upon graduation. The

integration of these professional requirements within the programme are considered to be a particular strength and evidence of best practice. Finally, the LMA has an established reputation within Latvia as the premier Maritime Training Academy and the delivery of this programme on the RTU campus, since the RTU LMA merger, should provide many good additional opportunities for further programme development and student recruitment. All changes made to study programme's parameters are justified and supported.

2.1.4.
The programme will help develop a suitably educated, highly qualified and technologically competent workforce for the maritime sector, where employment indicators internationally remain strong. The need for such a programme, when viewed in this context, is clear and obvious and is well defined. This programme is very much in keeping with other University and College settings around the world, particularly those that provide similar maritime education and professional training opportunities. It is stated that student recruitment remains relatively low (SAR p.103). To improve the situation it is suggested that a new, and more modern student recruitment strategy, perhaps one utilising the many social media tools available, should be developed and implemented as soon as possible.
Currently this professional Navigation programme is only taught in Latvian. For the future, it is suggested that the programme management considers creating an English language version of the 2 year full-time programme as a means of increasing student numbers, and for international income generation purposes. The ability to be able to offer full STCW training and safety courses is a strong indicator for the potential opportunities this may generate.
This short-cycle professional higher education study programme is quite unique in that it is specially designed for graduates of the new Maritime School programmes, leading to the Navigator (operating level) qualification on ships larger than 3000GT. Feedback obtained from current, and former, students confirmed that this short-cycle navigation programme provides excellent professional preparation for a first job at sea at the operational level. In addition, the inclusion of the fully supported, and mandated, internship/sea practice period is a particular strength of this programme. This aspect of the programme (Navigator, operating level) is very well documented (SAR pp. 110-111) and managed with the results of the internship, the content of the report, and the achieved professional outcomes fully documented and discussed upon completion of the period at sea. This student-centred and professional approach is to be commended.
The final assessment for this programme, prior to graduation, is very good and includes the following elements of assessment:
- Complex Speciality Examination
- State Examination in Maritime English
- Qualification Paper
This final assessment approach, combined with sea practice, fully ensures that graduating students have reached the requisite professional standard and have achieved the necessary learning outcomes.

2.1.5.
N/A

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:
This important professional navigation (Navigation 41525) programme will produce a fully competent workforce for the maritime sector. As stated, the employment indicators have been fully analysed and remain very strong. Feedback obtained from students and shipping industry

employers clearly indicated that this programme is particularly good at providing professionally trained graduates prepared for their first job at sea as “Navigator - operating level”. This is a good quality programme.

Strengths:
1. Fully meets international standards related to the Navigator (Operation Level).
2. Optional study modes offer excellent study flexibility.

Weaknesses:
1. State-funded budget places are only available for students who graduated from the RTU LMA Maritime School.
2. This programme is only taught in Latvian. Taught in English could boost student recruitment.
3. The study programme code indicates a focus on engineering science, which does not fully align with the qualification attainable through the programme.

2.2. The Content of Studies and Implementation Thereof

Analysis

2.2.1.
Study programme generally complies with the Cabinet Regulation No. 305 as of 13 June 2023, "Regulations on the State Standard for Professional Higher Education" (https://likumi.lv/ta/id/342818-noteikumi-par-valsts-profesionalas-augstakas-izglitibas-standartu). Courses of general education – 30 ECTS, industry-specific courses – 55.5 ECTS, traineeship – 24 ECTS, qualification work – 12 ECTS. In the study process, approximately 44.16 % of the study courses are implemented in practice despite 30% defined by standard.
Study programme complies with the professional standard "Navigator (operating level)" as October 16, 2023 (https://www.visc.gov.lv/lv/media/23577/download?attachment), as also with the specific regulatory framework of the relevant industry.
The design of this professional navigation programme is very thorough and, as stated earlier, is fully consistent and compliant with its professional maritime aspirations. The mandatory study courses, and their sequencing, are appropriate and will produce fully competent navigators to operate as “Officers of the Watch”. The programme is closely-aligned with appropriate IMO model courses and fully meets with STCW-78 requirements, and more generally the wider needs of the maritime sector. The final assessment for this programme, prior to graduation, is excellent and is entirely consistent with Latvian state examination requirements. The elements of assessment are defined in section 2.1.5. The qualification papers will ensure good consolidation of both theoretical knowledge and practical skills, in accordance with the STCW-78 Convention Code A-II/1, and compliance with the requirements of SOLAS-74 Convention Rule V/34 and the IMO Guidelines for Passage Planning. This approach is very strong and is to be commended.
However, there are concerns regarding the inclusion of modules on entrepreneurial competencies as mandated by Article 22.1 of the Standard. The regulation requires that programmes in mandatory part must include competencies, such as the organization and establishment of companies, management methods, the basics of project development and management, document and financial accounting systems, and knowledge of fostering social dialogue within society. It is unclear how the study programme addresses or integrates these competencies. The programme documentation does not provide sufficient detail to demonstrate how these outcomes are achieved within the existing curriculum structure by providing following mandatory courses: Maritime Economics (2 CP / 3 ECTS), Quality Management in Maritime Transport (1 CP / 1.5 ECTS), Labour Safety on Ships (1 CP / 1.5 ECTS), Ship Technical Management (1 CP / 1.5 ECTS), Basics of Maritime Law (1 CP/ 1.5 ECTS). Furthermore, the study programme plan does not include a free elective - C - part, therefore some

further clarification is needed. Rather than limiting the study programme to a set list of courses, the C section should allow flexibility for students to choose any course that meets their needs. Study programme fully complies with the professional standard “Navigator (operating level)” .

2.2.2.
N/A

2.2.3.
A very clear, and coherent, structure is presented, and the statements made in the programme descriptors effectively specify, in good detail, the professional nature of the syllabus content. This approach, using the implementation methods and syllabus content described (SAR p.106) should facilitate the development, achievement and the recording of the skills, knowledge and competences achieved during study of the programme. The current delivery modes allow students to study the programme, in Latvian, full-time over 2 or 3 years or part-time over 3 or 4 years (SAR pp.95-97). This delivery pattern offers excellent study flexibility.
The SAR clearly states (p.95-97) that the programme can be studied full-time or part-time. Despite this assertion, some additional details are required on how this part-time extramural study mode is implemented and managed for the different time scales indicated. Staff delivering this programme should develop a more formalised part-time study framework to deliver effective support to these 3 or 4 year part-time students. In addition, this should also demonstrate how this part-time study mode aligns with, and is equivalent to, the full-time programme.
No discussion was apparent within the programme documentation on how student pastoral and well-being support was provided when students were either onshore or offshore during sea practice. A suitable strategy should be implemented to provide student pastoral support and to promote student wellbeing whilst they are engaged in all aspects of their studies. (https://eurydice.eacea.ec.europa.eu/chapter-topics/higher-education).

2.2.4.
As described (SAR p.109), the use of internships, to provide a professional facing learning opportunity, is a particular strength of this programme of study. Meeting international STCW requirements, and the importance of these practical opportunities, including the involvement of student feedback in their effectiveness analysis and assessment, must not be understated. Therefore, the maintenance and continual improvement of this approach must remain of paramount importance to the course delivery team going forward. As described, the use of internships offers the “student-practitioner” a very good professional learning opportunity. This is a particular strength of this programme of study. Evidence of good practice, relating to student feedback, is also presented.

2.2.5.
N/A

2.2.6.
As stated before, the final assessment for this programme includes a Speciality examination, a state Maritime English examination and a Qualification Paper (QP). The topics covered by the QP could include Navigation and Piloting (preparation of the ship passage plan), Ship Handling and Watchkeeping, Ship Construction and Theory, Actions in Emergency Situations and Nautical Astronomy. These are entirely appropriate for this level of study. In addition, the requirements of the QP examination effectively assess all regulatory requirements of STCW-78 and SOLAS-74 and will thus meet all IMO needs (SAR p.113).

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:
This professional navigation programme is to be commended. As structured, it will produce a fully professional and competent workforce for the maritime sector. The employment needs of the maritime sector remain very strong, and this should ensure the programmes continued viability to recruit students considering employment in this sector. In addition, the feedback obtained from students, and shipping industry employers, clearly indicated that this programme is particularly good at providing professionally trained graduates prepared for their first job at sea as a Navigator - Operational Level.

Strengths:
1. Fully integrated professional STCW training within the programme of study.
2. Effective final assessment to gauge professional competence and understanding.

Weaknesses:
1. A more visible pastoral support structure to provide student support, and to promote student wellbeing is required.
2. A more detailed formalised part-time study and recruitment framework is required.
3. Study programme plan does not feature a free elective - C - part.
4. Module and/or courses on entrepreneurial competencies are not well defined.

Assessment of the requirement [5] (applicable only to master's or doctoral study programmes)

1 R5 - The study programme for obtaining a master's or doctoral degree is based on the achievements and findings of the respective field of science or field of artistic creation.

Assessment of compliance: Not relevant

2.3. Resources and Provision of the Study Programme

Analysis

2.3.1.
According to SAR p.114, there are available such common equipment for the implementation of the study programme “Navigation (41525)” as projectors and screens, interactive whiteboards, copiers, printers, scanners, portable computers and other multimedia equipment. During the tour of facilities the experts had an opportunity to see the different simulators used in the implementation of the study programme. For instance, full mission Bridge Simulators provides students with the competence “To carry out navigational watch”. There are many other examples of successful use of simulators in the study process – GMDSS, ECDIS, RADAR/ARPA and Liquid Cargo Handling simulator.
Compulsory STCW short training courses are conducted both in the premises of the Training Center in the RTU campus and on the pontoon "Kadets," which is equipped with specialised technical equipment corresponding to the specific course programme approved by the Registry of Seamen (e.g., lifeboats, life rafts, firefighting equipment, towing and mooring devices, first aid kits etc.).
During the on-site visit experts gathered confirmation that the students and teaching staff have an access to subscribed databases for studying and research purposes, including:
- EBSCO: Access to full-text and review databases in the humanities, social sciences, and exact sciences. Collection: National package Academic Search Complete.
- EBSCO: INSPEC: Access to full-text database in the exact sciences.
- KR - CON:2: Access to a subscription code for a specialised maritime regulatory document

database.
· International Maritime Organization (IMO): Database of current IMO documents.
It is important to mention that RTU Library provides access to previous years' students' theses/projects, methodological materials prepared by RTU LMA teaching staff and the latest navigation publications and textbooks relevant to the study programme.
All necessary study materials, including course descriptions, are uploaded to the study e-platform OMARS. The platform is regularly updated to ensure convenient access to study materials for both teaching staff and students.
According to SAR p.120, the review of the study programme's methodological and informational support, as well as the determination of procurement and improvement measures, takes place at least once during the academic year, through the preparation of annual reports and quality objectives by the relevant structural units of RTU LMA for the upcoming accreditation review period.

2.3.2.
N/A.

2.3.3.
According to SAR p.121, funding for the study programme includes:
- Grant or basic budget funding (state budget-funded student training).
- Fee-based student funding (both full-time on-site and part-time distance learning fee-based student training, as well as fees for re-examinations).
- Performance-based funding (support for scientific activities).
- Funding for the research base.
The funding allocated from the state budget for the implementation of the study programme per student is as follows: EUR 2771.19 in 2022 and EUR 3596.47 in 2023. RTU LMA has agreed with the Ministry of Education and Science to increase the budget funding per student by reducing the number of budget places. Compared with 2015, the number of budget places decreased from 154 to 113 in 2023. (SAR p.121) From experts' opinion the reduction of the state budget has left a negative impact on the number of enrolled students in recent years.
In addition to the state budget-funded study places, the study programme is also financed by the income from fee-paying students, whether they are individuals or legal entities. There is a tendency for an increase in the number of fee-paying students. The funding from fee-paying students is used for the renewal of material and technical support, attracting higher-level specialists to ensure the study process, and other purposes. The tuition fee for the study programme is EUR 3520 per year per student. (SAR p.121.)
Taking into account the above mentioned, experts are of the opinion that the financial resources available for the implementation of the study programme mostly are sufficient. However there is also need for extra funding to develop the specific material technical provisions of the study programme, such as training infrastructure for short training courses.

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:
The funding available for the implementation of the study programme is sufficient to ensure the part time and full time study process. Study infrastructure, equipment, and simulators available for the study programme “Navigation (41525)” are modern and correspond to the goals and planned results of the programme.

Strengths:
1. Professional and highly competent instructors of simulators used in the study process;

Weaknesses:
1. Despite the fact that the number of state budget places is higher than for marine engineering and electro automation study programmes, it's still not sufficient to enhance the number of enrolled students.

Assessment of the requirement [6]

1 R6 - Compliance of the study provision, science provision (if applicable), informative provision (including library), material and technical provision and financial provision with the conditions for the implementation of the study programme and ensuring the achievement of learning outcomes

Assessment of compliance: Fully compliant

Justification: The funding available for the implementation of the study programme is sufficient to ensure achievement of the learning outcomes, namely, financial provision comply with specific features and the conditions for the implementation of the study programme. Study infrastructure, equipment and simulators available for the study programme “Navigation (41525)” are modern and correspond to the goals and planned results of the programme.

2.4. Teaching Staff

Analysis

2.4.1.
The qualification obtained by the teaching staff involved in the implementation of the study programme “Navigation” complies with the conditions for the implementation of the study programme and the requirements of regulatory enactments. The education obtained for all teachers is practically directly related to the specific field of science, as also they possess the necessary research skills and expertise to provide students with the required learning outcomes within the scope of the conducted courses in accordance with STCW and higher education requirements (SAR, Study Programme "Navigation" (41525) 3.4. Teaching Staff, 3.4.1.). All staff members teaching specialised courses within the study programme have obtained the appropriate instructor-evaluator certificates and regularly update their competencies and knowledge. Number of teachers and other personnel ensure delivery of intended learning outcomes in the programme. As said in SAR (Study Programme "Navigation" (41525) 3.4. Teaching Staff, 3.4.1.) and confirmed during visit the teaching staff (number, qualification) complies with the requirements specified in Law on Higher Education Institutions. The teaching personnel (instructors, supervisors and assessors) of the general and professional subjects are education and/or maritime professionals with the relevant seafarer’s qualification, and with the relevant seagoing service.
Totally, 34 lecturers, including 3 professors, 3 associate professors and 15 docents, from the RTU LMA staff are involved in implementation of the short-cycle professional higher education study programme "Navigation". The compliance of visiting professors, associate visiting professors, visiting docents, visiting lecturers, and visiting assistants is evaluated based on the Regulations No. 4 "On the Management of Academic Staff at the Latvian Maritime Academy" of the Latvian Maritime Academy. Lecturers with extensive professional work experience in the field are also involved in the implementation of the study programme “Navigation”.
The personnel of RTU LMA actively participate in training courses organised by the RTU LMA Training Center, as also professional English language and instructor-evaluator courses (SAR, Study Programme "Navigation" (41525) 3.4. Teaching Staff, 3.4.1.). In overall, qualification enhancement is promoted both locally and internationally by RTU LMA management.

2.4.2.

The total number of teaching staff involved in the study programme increased in recent years, which the management of the study programme associates with the possibility of providing a separate teaching staff for each study course (SAR, Study Programme "Navigation" (41525) 3.4. Teaching Staff, 3.4.2.). This is especially relevant in study courses where the instructors-evaluators must be trained in accordance with the requirements of Regulation I/6 of the STCW Convention and qualified in the field being taught and assessed, and must renew their knowledge of the requirements of the STCW Convention and other international regulatory enactments in the field of professional training of seafarers every five years. Despite the uncompetitive salary level compared to the salary in the industry, the management of RTU LMA manages to attract new teaching staff to independent work at RTU LMA without reducing the quality of the study programme. Teachers are enthusiastic, they provide good support for the operation of LMA
In general, teaching staff of various levels and professional qualifications are involved in the implementation of the study programme, which includes both practising mariners and professionals from maritime industry companies. Staff work in multiple jobs, which leads to overload and can affect the quality of the teaching process.

2.4.3.
N/A

2.4.4.
11 of all staff members have publications in the last 6 years, mainly for professors, assoc. professors and docents. The rest of the teaching staff has more than 5 years of practical work experience in the industry, for example, in the position of captain, chief officer, senior ship inspector, etc. The analysis is based on the staff CV (II - Description of the Study Field - 2.3. Resources and Provision of the Study Field; Annex CV ENGv2.zip) and list of publications (II - Description of the Study Field - 2.4. Scientific Research and Artistic Creation; Annex Publications-Patents-Conferences ENG v2.zip).

2.4.5.
Interviews with staff members confirmed that faculty collaborate with each other through various mechanisms (informal meetings of teaching staff, departmental meetings, discussions on study outcomes and quality assurance principles, and other events) established by the LMA. At least once a month, structural unit meetings are organised to promote not only mutual communication between employees, but also to discuss current issues related to the study and scientific process (SAR, Study Programme "Navigation" (41525) 3.4. Teaching Staff, 3.4.5.). The improvement of study courses is based on the suggestions of both students and teaching staff and members of the state examination commission.
In addition to that, the RTU LMA also has informal faculty meetings, which allow discussing current issues in an informal atmosphere, and then, in the event of a formal decision, inform the heads of the structural units about it and include the issue in the structural unit's meeting.

Conclusions on this set of criteria, by indicating strengths and weaknesses

Conclusions:
The qualification of the teaching staff involved in the implementation of the study programme complies with the conditions for the implementation of the study programme and requirements of regulatory enactments. The qualification of the teaching staff is on a good level, but the scientific activities should be improved, as they can only be observed for 1/3 of the teaching staff. The increasing number of teaching staff can have a positive effect on the quality of studies. Staff actively participate in training courses organised by the RTU LMA Training Center. Cooperation between the teaching staff and the director of the study programme is at a good level, which ensures the

appropriate flow of information between the director of the study programme and the teaching staff.

Strengths:
1. Communication is at a good level between the staff and the study programme director.
2. Increase in the number of teaching staff.
3. Lecturers from maritime industry companies are involved in the study process.

Weaknesses:
1. Staff overload is possible for teaching staff trying to combine work at RTU LMA and one or more companies.

Assessment of the requirement [7]

1 R7 - Compliance of the qualification of the academic staff and visiting professors, visiting associate professors, visiting docents, visiting lecturers and visiting assistants with the conditions for the implementation of the study programme and the requirements set out in the respective regulatory enactments.

Assessment of compliance: Fully compliant

Justification: The qualification of the teaching staff involved in the implementation of the study programme complies with the conditions for the implementation of the study programme and the requirements of regulatory enactments.

2.5. Assessment of the Compliance

Requirements

1 1 - The study programme complies with the State Academic Education Standard or the Professional Higher Education Standard

Assessment of compliance: Partially compliant

Annex (“P06_UIV0(44525)_AtbilstibaValstsStandartam_ENGv2.docx”) confirms that the study programme complies with Cabinet Regulation No. 305 “Noteikumi par valsts profesionālās augstākās izglītības standartu”. Environment and Civil protection course (LJA301 Civil Protection) is included in the programme. However, modules on entrepreneurial competencies, as mandated by standard (Article 11), are not well defined. Part of the study programme should not just consist of a predefined list of courses, but offer the flexibility to take any course as part of the C section.

2 2 - The study programme complies with a valid professional standard or the requirements for the professional qualification (if there is no professional standard required for the relevant occupation) provided if the completion of the study programme leads to a professional qualification (if applicable)

Assessment of compliance: Fully compliant

Annex (“P07_UKV0(41525)_AtbProfStand_IsaisCikls_ENGv2.docx”) confirms that the programme complies with the professional standard “Navigator (operating level)” approved on 16. October, 2013.

3 3 - The descriptions of the study courses and the study materials have been prepared in all languages in which the study programme is implemented, and they comply with the requirements set forth in Section 561 , Paragraph two and Section 562 , Paragraph two of the Law on Higher Education Institutions.

Assessment of compliance: Fully compliant

Attached study course descriptions (“SKA KV-I220-225_ENG.zip”) are prepared in Latvian. Descriptions comply with regulations set forth in Law on Higher Education Institutions.

4 4 - The sample of the diploma to be issued for the acquisition of the study programme complies with the procedure according to which state recognised documents of higher education are issued.

Assessment of compliance: Partially compliant

The provided Diploma sample (“KEA-bak-diploms&pielikumsv2ENG.zip”) partially complies with the procedure by which state-recognised documents of higher education are issued in accordance with Cabinet Regulation No. 202 “Kārtība, kādā izsniedz valsts atzītus augstāko izglītību apliecinošus dokumentus” as provided sample contains only 3rd page of diploma and supplement. Diploma supplement also is outdated.

5 5 - The academic staff of the academic study programme complies with the requirements set forth in Section 55, Paragraph one, Clause 3 of the Law on Higher Education Institutions.

Assessment of compliance: Not relevant

6 6 - Academic study programmes provided for less than 250 full-time students may be implemented and less than five professors and associated professors of the higher education institution may be involved in the implementation of the mandatory and limited elective part of these study programmes provided that the relevant opinion of the Council for Higher Education has been received in accordance with Section 55, Paragraph two of the Law on Higher Education Institutions.

Assessment of compliance: Not relevant

7 7 - At least five teaching staff members with a doctoral degree are among the academic staff of an academic doctoral study programme, at least three of which are experts approved by the Latvian Science Council in the respective field of science. At least five teaching staff members with a doctoral degree are among the academic staff of a professional doctoral study programme in arts (if applicable).

Assessment of compliance: Not relevant

8 8 - The teaching staff members involved in the implementation of the study programme are proficient in the official language in accordance with the regulations on the level of the official language knowledge and the procedures for testing official language proficiency for performing professional duties and office duties.

Assessment of compliance: Fully compliant

Attached resumes of staff (“CV ENGv2.zip”) and confirmation (“Confirmation - knowledge of the state language.edoc”) verifies that state language proficiency is compliant with Cabinet Regulation No. 733 "Noteikumi par valsts valodas zināšanu apjomu, valsts valodas prasmes pārbaudes kārtību un valsts nodevu par valsts valodas prasmes pārbaudi".

9 9 - The teaching staff members to be involved in the implementation of the study programme have at least B2-level knowledge of a related foreign language, if the study programme or any part thereof is to be implemented in a foreign language (if applicable).

Assessment of compliance: Not relevant

10 10 - The sample of the study agreement complies with the mandatory provisions to be included in the study agreement.

Assessment of compliance: Fully compliant

Sample of attached study agreement (" Sample_of_study_agreement.zip") complies with Cabinet Regulation No. 70 "Studiju līgumā obligāti ietveramie noteikumi".

11 11 - The higher education institution / college has provided confirmation that students will be provided with opportunities to continue their education in another study programme or another higher education institution or college (agreement with another accredited higher education institution or college) if the implementation of the study programme is terminated.

Assessment of compliance: Fully compliant

Attached contracts ("Līgumi par studiju parnemšanu ENG.zip") confirms that the institution provides the possibility to continue studies within the following options: (1) Liepaja Maritime College short-cycle programme "Navigation";(2) Novikontas Maritime College short-cycle professional programme "Maritime Transport".

12 12 - The higher education institution / college has provided confirmation that students are guaranteed compensation for losses if the study programme is not accredited or the study programme's license is revoked due to the actions (actions or omissions) of the higher education institution or college and the student does not wish to continue studies in another study programme.

Assessment of compliance: Fully compliant

RTU confirmation ("Confirmation - on compensation for losses.edoc") states, that students are guaranteed compensation for losses if the study programme is not accredited or the licence of the study programme is revoked due to the actions of the college (actions or failure to act) and the student does not wish to continue the studies in another study programme.

13 13 - The joint study programmes comply with the requirements prescribed in Section 55.(1), Paragraphs one, two, and seven of the Law on Higher Education Institutions (if applicable)

Assessment of compliance: Not relevant

14 14 - Compliance with the requirements specified in other regulatory enactments that apply to the study programme being assessed (if applicable)

Assessment of compliance: Fully compliant

Annex ("Compliance with the specific regulatory framework of the relevant industry KV-Iv2.docx") confirms, that programme complies with STCW Convention and relevant EU and Latvian regulatory requirements such as Directive (EU) 2022/993 of the European Parliament and of the Council of 8 June 2022 on the minimum level of training for seafarers, Maritime Administration and Marine Safety Law (LV), Regulations Regarding the Medical Fitness of Seafarers for Work on a Ship (LV), Regulations Regarding Certification of Seafarers (LV), Regulations Regarding Certification, Implementation, and Monitoring of Professional Training Programmes for Seafarers (LV).

Assessment of the requirement [8]

1 R8 - Compliance of the study programme with the requirements set forth in the Law on Higher Education Institutions and other regulatory enactments.

Assessment of compliance: Partially compliant

Study programme generally complies with regulatory enactments. Provided diploma sample is only partial and C part (free elective) consists of a predetermined list of courses. The Module on entrepreneurial competencies is not well defined.

General conclusions about the study programme, indicating the most important strengths and weaknesses of the study programme

First level professional higher education study programme “Navigation” (41525) is effective in training a skilled workforce for the maritime sector, with strong employment indicators and positive feedback from both students and industry employers. Graduates are well-prepared for their first roles at sea. Key strengths of the programme include its alignment with STCW requirements and flexible study options. However, there are areas needing improvement, such as a clearer academic quality assurance framework and better pastoral support for student well-being. The teaching staff meets regulatory qualifications, but their scientific involvement needs enhancement. Good communication exists between the staff and the programme director, and the growing number of instructors is beneficial. Nevertheless, some staff may experience overload due to balancing work at the institution and industry jobs. The program's funding is adequate, and it has modern infrastructure and experienced instructors. However, there is a limited number of state-funded places available for students. Overall, the programme is well-positioned to meet the ongoing demands of the maritime sector.

Strengths:
1. Fully meets STCW requirements with fully integrated professional training as part of the study programme.
2. Optional study modes offer excellent study flexibility.
3. Lecturers representing industry are involved in the study process.

Weaknesses:
1. A suitable strategy/mechanism to provide student pastoral support and to promote student wellbeing whilst they are engaged in their studies is required.
2. A more detailed formalised part-time study framework is required
3. Staff overload is possible for teaching staff trying to combine work at RTU LMA and one or more companies

Evaluation of the study programme "Navigation"

Evaluation of the study programme:

Good

2.6. Recommendations for the Study Programme "Navigation"

Short-term recommendations

1. Ensure that programme includes free elective (C) part as required by Law on Institutions of Higher Education.
2. Define modules or courses regarding entrepreneurial skills as required by state professional education standards.
3. Provide a full diploma example with an updated supplement.
4. Reconsider the study programme code to one that more accurately reflects the programmes content and outcomes.

Long-term recommendations

1. Develop a more visible support structure to provide student pastoral support, and to promote student wellbeing.
2. Develop a more detailed formalised part-time study framework.
3. Develop a strategy to increase the number of state budget financed places.
4. Director of the study programme should control the workload of the teaching staff, the number of study courses to be taught, in order to avoid a decrease in the quality of teaching.
5. Director of the study programme should pay attention to the maximum involvement of all staff in various scientific activities (writing publications, participating in projects, etc.) trying to find the potential contribution of each employee.

II - "Maritime Transport - Marine Electrical Automation" ASSESSMENT

II - "Maritime Transport - Marine Electrical Automation" ASSESSMENT

2.1. Indicators Describing the Study Programme

Analysis

2.1.1.
The underpinning professional maritime focus of the programme clearly meets the specific needs of STCW (Convention on Standards of Training, Certification, and Watchkeeping) and the IMO (International Maritime Organisation) "Regulations on Certification of Seafarers," (https://www.imo.org/en/ourwork/humanelement/pages/stcw-conv-link.aspx), and the European Parliament and Council Directive 2022/993 (SAR p.264). Delivered in both Latvian and English (SAR pp.261-262) makes this a very viable study programme, one in keeping with level 6 of the Framework for Qualifications (EQF) in the European Higher Education Area (http://www.enaee.eu/). The RTU LMA merger presented the opportunity for programme development. Consequently, there is clear evidence of effective, and ongoing, training needs analysis having been conducted (SAR p.263).
Study programme complies with the study field of “Seafaring”.

2.1.2.
The duration and scope of the study programme implementation (including different study programme implementation options), as well as the implementation language, are reasonable and justified.
Study programme code is 42525 wherein 42 corresponds to second level professional higher education and 525 corresponds to “Mechanical Sciences (Motor Vehicles, Ships and Aircraft)” (Cabinet Regulation No. 322 “Noteikumi par Latvijas izglītības klasifikāciju”). Degree and qualification to be obtained at the successful graduation is Professional bachelor degree in maritime transport with qualification of “Marine electromechanical engineer”. Qualification examination is conducted in accordance with STCW and VSIA "Latvian Maritime Administration" Seafarers Register methodology. Admission criteria includes a valid medical certificate issued by a maritime doctor confirming fitness for work on a ship as mandated by Latvian regulatory enactments and secondary education diploma. The programme comprises 278 ECTS. RTU LMA is seeking accreditation for both the Latvian and English language versions of the programme. The duration is 4 years and 3 months for the full-time option and 5 years for the part-time option.
The title of this professional bachelor’s study programme, designed for school leaver entrants (some from the Maritime School), is appropriate and will provide students with the comprehensive

theoretical and practical knowledge required to become an effective marine electromechanical engineer. However, consideration should be given in the future to renaming the programme as “Maritime Transport – Electrotechnology”. Following the merger of RTU LMA this programme is now delivered on the RTU campus. The programme, which can be studied in English or Latvian, builds on students’ previous secondary education. Study of the programme is either full-time or on a part-time extramural basis. In addition, the English language version requires knowledge of English at least at B2 level.
Given that a good proportion of students follow the part-time route (SAR pp.267-268), this is a concern. It would appear from the interviews with staff that the development of theoretical elements is carried out on an “ad-hoc” basis on the e-learning platform (OMARS) with attendance required for practical activities. Staff managing this programme should develop a more formalised development strategy for these part-time students. (https://jime.open.ac.uk/articles/10.5334/jime.470)
The documentation provided also states (SAR p.179) that the programme is designed for implementation in English. This initiative is to be applauded and should support international student recruitment, beneficial to the dwindling student numbers on the programme. However, the SAR provides very little detail (two paragraphs SAR p.272) regarding how the English programmes will be delivered and assessed. It is suggested that the course team needs to fully develop a suitable and visibly more robust strategy for this delivery mode.

2.1.3.
As stated earlier, the programme documentation and staff interview clearly indicates that the programme has been suitably benchmarked against all current Latvian Educational Classification requirements (these are described SAR pp. 263-264). The programme also closely aligns with STCW requirements, the European Qualifications Framework (EQF) and IMO standards. The overarching academic and quality assurance framework is applied to beneficial effect within the documentation and confirmed during staff interviews. However, the programme management should review and update the current programme specifications to include a clear set of grade descriptors showing the achievement criteria for the award of marks for assignments, and where possible, map these against the learning outcomes for individual courses within the programme. In addition, in the context of best practice, the institution, which here is delivering a fully accredited maritime degree programme, should be seen to be more clearly promoting equality, diversity and inclusion in line with applicable national charters (https://www.diversity.lv/dazadibas-harta/), and international frameworks (https://unglobalcompact.org/take-action/action/dei).
The recent RTU LMA merger has provided an excellent opportunity for further programme development and extension. Currently courses within this programme are studied only by LMA students. The merger has provided the University with the equipment to deliver all required STCW professional courses (including safety training). This resource could provide excellent income generation opportunities. In addition, RTU LMA courses could be made available to RTU students on traditional programmes for elective study, thus boosting student numbers for inclusion in the programme statistics.

2.1.4.
Feedback obtained from alumni suggested that the LMA Maritime Transport (Marine Electrical Automation) programme provided them with an excellent professional preparation for their first job at sea. This aspect is also to be commended for the very strong links which were demonstrated during interviews with local shipping employers. Currently however, recruitment to this programme of study is not good, with student numbers declining consistently over the last few years (SAR p.267). Consequently, this issue is a matter of concern, and could cause the closure of the programme if it is not addressed as a matter of urgency. To improve the situation it is suggested that a new modern student recruitment strategy, perhaps one utilising the many social media tools

available, is required with implementation as soon as possible. With regards to international student recruitment it is suggested that international recruitment agencies (such as https://bmiglobaled.com/about-bmi/) be investigated to see if assistance with this activity is available. RTU LMA has a very strong local reputation in the maritime sector. It is clear that this reputation can be exploited to a fuller extent on the international stage, particularly in those countries with developing maritime industries. Current global maritime employment opportunities remain very strong (https://www.ics-shipping.org/shipping-fact/shipping-and-world-trade-global-supply-and-demand-for-seafarers/)

2.1.5.
N/A

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:
This important LMA Maritime Transport (Marine Electrical Automation) programme will produce a professionally competent workforce for the maritime sector. The need for such a programme is well defined and is very much in keeping with those delivered by other Maritime training and education settings around the world, particularly those that provide similar maritime education study programmes. Although participant student numbers have been falling in number since 2018/19, this new revitalised programme should go some way towards improving recruitment and retention. As stated, the employment indicators have been fully analysed and remain strong. Feedback obtained from former students (alumni) and shipping industry employers clearly indicated that this programme generates particularly good graduates professionally prepared for their first job at sea.

Strengths:
1. The use of returning experienced seafaring alumni, with suitable up-to-date industry knowledge, to instruct current students is very beneficial to the student's professional development.

Weaknesses:
1. The programme director should develop a more visible strategy to provide greater student pastoral support, and to promote student wellbeing whilst they are engaged in their studies.
2. The ongoing reduction in student numbers in this maritime engineering programme should be managed as a matter of urgency. To facilitate this, a suitable student recruitment strategy should be developed and implemented as soon as possible.

2.2. The Content of Studies and Implementation Thereof

Analysis

2.2.1.
The overarching design of the curriculum has been fully redeveloped five times since 2012 and as such remains entirely consistent with the stated aims of the programme and the requirements for Latvian Maritime Administration Seafarers Register qualification (VSIA). The cornerstone professional study courses (SAR p.269) are as follows.
- Electrical, electronic and control equipment,
- Ship technical maintenance and repair,
- Ship personnel care and management,
- Computer technology and cyber security,
- Compulsory courses in the humanities and social sciences.

These are entirely appropriate and suitable for the modern professional nature of the programme. All key areas of study for STCW validation are included in the programme documentation. This was confirmed during staff interviews, and fully meets the requirements for professional employment as a maritime electromechanical engineer, and more generally meets the wider needs of the maritime sector. In addition, the assessment of the programme learning outcomes, as described, is effective and makes suitable use of a number of different assessment strategies. Strengthening changes (through increased credit points) have been made across all key areas of the curriculum. It is also suggested that equality, diversity and inclusion, in line with the applicable national regulatory framework (https://www.diversity.lv/dazadibas-harta/), be embedded more deeply within the curriculum where this is relevant and appropriate (see recommendations in section 1.5). In addition, security management should be considered for inclusion, with a particular mention of the International Ship and Port Facility Security (ISPS) code. (https://www.imo.org/en/OurWork/Security/Pages/SOLAS-XI-2%20ISPS%20Code.aspx).
The annex ("P06_3.2.1_UCE0_42525_AtbilstibaValstsStandartam_ProfBak_LV_Jūras transports - kuģa elektroautomātika_ENGv2.docx") confirms that the study programme generally complies with the requirements of Cabinet Regulation No. 305, titled "Noteikumi par valsts profesionālās augstākās izglītības standartu" ("Regulations on the National Professional Higher Education Standard"). Notably, the study programme includes the Environment and Civil Protection courses. However, there are concerns regarding the inclusion of modules on entrepreneurial competencies as mandated by Article 22.1 of the Standard. The regulation requires that programmes in mandatory part must include competencies, such as the organization and establishment of companies, management methods, the basics of project development and management, document and financial accounting systems, and knowledge of fostering social dialogue within society. It is unclear how the study programme addresses or integrates these competencies. The programme documentation does not provide sufficient detail to demonstrate how these outcomes are achieved within the existing curriculum structure by providing following mandatory courses: Maritime Economics – 1 CP/ 1.5 ECTS. Maritime Economics - course project – 1 CP/ 1.5 ECTS, Quality Management in Maritime Transport – 1 CP/ 1.5 ECTS, Engine Resource Management – 2 CP/ 3 ECTS, Labour Safety and Legislation on Ships – 2 CP/ 3 ECTS, Maritime Law – 2 CP/ 3 ECTS. Furthermore, the study programme plan does not include a free elective - C - part, therefore some further clarification is needed.

2.2.2.
N/A

2.2.3.
A clear and coherent structure, and the statements made in the LMA Maritime Transport (Marine Electrical Automation) descriptors (SAR p.269), and confirmed during staff interview, effectively describe the indicative syllabus content. This approach should facilitate the development, achievement and the recording of the skills, knowledge and competences achieved during study of the programme. As stated earlier the programme makes effective use of appropriate IMO and STCW professional requirements. In addition, modern online delivery approaches are utilised (Moodle platform RTU ORTUS). This suitably flexible programme can be studied on both a part-time extramural (5 years) or a full-time (4 years, 3 months) basis. These approaches are to be commended. This should encourage a suitable level of student uptake and participation. However, as stated previously, the course team should review and update the current programme specifications to include a clear set of grade descriptors showing the achievement criteria for how the final assignment(s) mark is arrived at. In addition, a holistic delivery approach, one combining online, practical and where possible face-to-face teaching, is suggested. The listing of specific learning outcomes within a programme does not imply a linear approach to teaching and learning .

It is likely that throughout a programme, different learning outcomes are delivered concurrently within the several courses that make up the programme. This is most likely the case where project work, leading to a thesis, is carried out. It is recommended that the individual course learning outcomes are listed (grouped together) in a grid system to provide a suitable holistic view of the overarching programme learning outcomes. The EQF approach within this context is defined at https://www.enaee.eu/eur-ace-system/standards-and-guidelines/#standards-and-guidelines-for-accreditation-of-engineering-programmes.
(In case of a joint study programme, or in case the study programme is implemented in a foreign language or in the form of distance-learning, analyse in detail the methods used for the implementation of such a study programme).

2.2.4.
As described, the proposed use of practical laboratory exercises, simulators and specialised computer software (SAR p.277) is a good indicator of effective modern hands-on teaching practices being utilised effectively. In addition, the use of sea practice (SAR p.272), and the opportunity for employment and career planning activities, is a particular strength of this programme. This important STCW certification requirement is an important cornerstone of this programme, the requirement and importance of these practical opportunities must not be understated. Therefore, the maintenance and continual improvement of this approach must remain of paramount importance to the course delivery team going forward. Feedback from students indicated that the preparation delivered prior to sea practice is variable in quality and often poorly attended by students. Student attendance at this preparation lecture should be compulsory. The teaching approach utilised by this programme is very much in keeping with Maritime Colleges and Universities, and similar settings around the world (see for instance https://maritime.solent.ac.uk/). This is acknowledged as a particular strength of this programme.

2.2.5.
N/A

2.2.6.
Thesis
The requirement for a capstone thesis (final year project), and its defence, should effectively ensure that a graduating student from this programme has met all the requisite learning outcomes and so has attained all the necessary skills and competences required for initial employment in the maritime sector. In this context it is suggested that for future accreditations the following elements could be included for evaluation:
- Student project handbook detailing learning outcomes and assessment criteria.
- A representative sample of thesis reports.

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:
The overarching design of this programme is strong, well thought out and is consistent with its stated aims. The compulsory professional courses are all delivered to an international level of competence appropriate for the professional nature of the programme. The final assessment of the programme includes the preparation and defence of a diploma thesis, and a Maritime English Examination and Qualification examination in accordance with STCW and VSIA. This assessment approach is essential and entirely appropriate for this level of study. The programme also meets all STCW requirements and IMO standards. Some additional work by the programme team is required to show full equivalence with the learning areas defined by the EQF. The merger of LMA with RTU has

provided both institutions with the opportunity to develop additional professional training, and this coupled with LMA's established reputation as a premier Maritime Training Academy, bodes well for the future.

Strengths:
1. The number of different course delivery formats currently provides good programme flexibility. However, the careful management of these flexible approaches is essential to minimise potential programme completion delays.
2. The assessment of the programme learning outcomes is effective and makes beneficial use of a number of different assessment strategies, including assessed practical work, examinations, and the oral defence of project work.

Weaknesses:
1. Feedback from former students suggests that the programme curriculum would benefit from the inclusion of important "soft" management skills such as communication, leadership, conflict resolution and adaptability (recommendations section 1.5).
2. The preparation delivered prior to sea practice is variable in quality and often poorly attended by students. Student attendance at this preparation activity should be made compulsory.
3. Study programme plan does not feature a free elective - C - part.
4. Modules and/or courses on entrepreneurial competencies are not well defined.

Assessment of the requirement [5] (applicable only to master's or doctoral study programmes)

1 R5 - The study programme for obtaining a master's or doctoral degree is based on the achievements and findings of the respective field of science or field of artistic creation.

Assessment of compliance: Not relevant

2.3. Resources and Provision of the Study Programme

Analysis

2.3.1. For the both study programmes "Marine Electrical Automation (42525)" and Maritime Transport - Marine Engineering (42525) mostly the same study infrastructure, informative and material and technical provisions are used.
Taking into account the opinion received from the Registry of Seamen and results of the interviews with the teaching staff involved and the Director of Engineering programmes, it was observed that the study provisions as well as material and technical provisions of the study programme "Maritime Transport - Marine Electrical Automation (42525)" are compliant with the relevant requirements of the STCW Convention standard A-III/6 to ensure achievement of the learning outcomes. However in this respect it's important to highlight that the information included in the SAR (for instance, Section 2.3. Resources and Provision of the Study field) is not reflecting properly the current situation with material and technical provisions as the RTU LMA has moved to the new premises in the campus of RTU.
During the tour on facilities the experts had an opportunity to see the different simulators and laboratories used in the implementation of the study programme, for instance, UNITEST Engine Room Simulator with high level of functionality (Medium speed Engine, Low Speed Engine, Gas Turbine propulsion etc.) manly is used. Students also have access to the Ship Dual-Fuel Engine and Liquefied Cargo Simulator Laboratory. (SAR p.276 - 277.)
According to SAR p.276, the following basic laboratories and workshops are available for students:

- The Electromechanical workshop is designed for the repair and diagnostics of electric equipment such as motors, generators and power electronics using soldering and assembly equipment, as well as for practical use of electrical measurement instruments, including multimeters, meggars, and oscilloscopes.
- The Ship Control Systems Laboratory is equipped with modern pneumatic and hydraulic stands, programmable logic controllers, analog control system training stands, and ship propeller simulation equipment. These facilities allow students to acquire theoretical knowledge and practically verify it.
- The Electronics and Electrical Engineering Laboratory is fully equipped with all the necessary measurement and diagnostic instruments, as well as soldering equipment and magnifying glasses. This laboratory provides students with the opportunity to learn the basics of electrical engineering and electronics using training kits from Lukas Nulle and K&H, as well as ARDUINO, ESP32, and PIC training platforms.
- The Electric Machines Laboratory is equipped for students to gain practical experience in electromechanical converters and their operating principles.
- The High Voltage Equipment Laboratory is fully equipped with high voltage switching devices and all necessary safety equipment. This laboratory provides students with the opportunity to learn safety measures while working with high voltage switching devices, offering them the necessary theoretical and practical training.

However, during the tour of the facilities experts noticed that not all relevant electrical equipment used on board the ships is available at the premises of RTU LMA. For instance, diesel generator synchronisation stends, which are important for the study programme “Maritime Transport - Marine Electrical Automation”.
Compulsory STCW short training courses are conducted both in the premises of the Training Center in the RTU campus and on the pontoon "Kadets," which is equipped with specialised technical equipment corresponding to the specific course programme approved by the Registry of Seamen (e.g., lifeboats, life rafts, firefighting equipment, towing and mooring devices, first aid kits etc.).
During the on-site visit experts gathered confirmation that the students and teaching staff have an access to subscribed databases for studying and research purposes, including:
- EBSCO: Access to full-text and review databases in the humanities, social sciences, and exact sciences. Collection: National package Academic Search Complete.
- EBSCO: INSPEC: Access to full-text database in the exact sciences.
- KR - CON:2: Access to a subscription code for a specialised maritime regulatory document database.
- International Maritime Organization (IMO): Database of current IMO documents.
It is important to mention that RTU Library provides access to previous years' students' theses/projects, methodological materials prepared by RTU LMA teaching staff and the latest navigation publications and textbooks relevant to the study programme.
All necessary study materials, including course descriptions, are uploaded to the study e-platform OMARS. The platform is regularly updated to ensure convenient access to study materials for both teaching staff and students.

2.3.2.
N/A

2.3.3.
According to SAR p.279, funding for the study programme “Maritime Transport - Marine Electrical Automation (42525)” includes:
- Grant or core budget funding (state budget funding for student training)
- Fee-paying student funding (both full-time on-site and part-time off-site fee-paying student

- training, as well as fees for retaking exams);
- Performance funding (funding for scientific support)
- Funding for research infrastructure.

The funding allocated from the state budget for the implementation of the study programme per student is in 2022 - 2771.19 EUR, in 2023 - 3596.47 EUR. RTU LMA agreed with the Ministry of Education and Science to increase the budget funding per student by reducing the number of budget places. Compared to 2015, the number of budget places decreased from 77 to 50 in 2023. (SAR p.279) In addition to the state budget-funded study places, the study programme's funding also includes tuition fees from individuals or legal entities. The funding from fee-paying students is used for the renewal of material and technical resources, attracting higher-level specialists to ensure the study process, etc. The tuition fee per student for the study programme "Maritime Transport - Marine Electrical Automation" is 3,520 EUR per year. From experts' opinion the reduction of the state budget has left a negative impact on the number of enrolled students in recent years.

In addition to the state budget-funded study places, the study programme is also financed by the income from fee-paying students, whether they are individuals or legal entities. There is a tendency for an increase in the number of fee-paying students. The funding from fee-paying students is used for the renewal of material and technical support, attracting higher-level specialists to ensure the study process, and other purposes. The tuition fee for the study programme “Maritime Transport - Marine Electrical Automation” is EUR 3520 per year per student. (SAR p.279.)

Taking into account above mentioned, experts are in the opinion that the financial resources available for the implementation of the study programme mostly are sufficient.

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:

The funding available for the implementation of the study programme " Maritime Transport - Marine Electrical Automation" is sufficient to ensure the part time and full time study process. Study infrastructure, equipment, and simulators available for the study programme are modern and correspond to the goals and planned results of the programme. However there is still a slight need to improve the technical provisions in the respect of the practical part of the study programme. For instance, use of diesel engine synchronisation stands in the practical tasks are highly advisable.

Strengths:

1. Well organised and equipped mechanical and welding workshops.
2. Well developed and fully supportive e-study platform (OMARS).

Weaknesses:

1. Relatively small number of state financed budget places.
2. Only a slight improvement of technical provisions for the study process is needed, for instance, life electrical equipment used onboard the ships (diesel generator synchronisation stends).

Assessment of the requirement [6]

1 R6 - Compliance of the study provision, science provision (if applicable), informative provision (including library), material and technical provision and financial provision with the conditions for the implementation of the study programme and ensuring the achievement of learning outcomes

Assessment of compliance: Fully compliant

Justification: The funding available for the implementation of the study programme is sufficient to ensure achievement of the learning outcomes, namely, financial provision comply with

specific features and the conditions for the implementation of the study programme. Study infrastructure, equipment and simulators available for the study programme “Maritime Transport - Marine Electrical Automation” are modern and correspond to the goals and planned results of the programme.

2.4. Teaching Staff

Analysis

2.4.1.
The qualification obtained by the teaching staff involved in the implementation of the study programme "Maritime Transport - Marine Electrical Automation" complies with the conditions for the implementation of the study programme and the requirements of regulatory enactments, involving in study process professors and lecturers with a doctoral or master's degree, each of whom is an expert in their field. The education obtained for all teachers is practically directly related to the specific field of science. In accordance with the objectives of the study programme, the primary criteria for selecting teaching staff are: (a) knowledge of the latest technologies and participation in scientific and research projects in their respective fields, (b) pedagogical skills relevant to contemporary trends in the respective field, and (c) experience in delivering courses to international students in English.
The implementation of the study programme delivery of indented learning outcomes is ensured by the academic staff of RTU LMA - professors and lecturers with doctoral and master's degrees. If necessary, it is planned to attract teaching staff from the Lithuanian Maritime Academy, as well as industry professionals and working seafarers to ensure the study programme. The selection of guest lecturers is based on the existence of a scientific degree in engineering and work experience working on ships or in the maritime industry (SAR, Study Programme "Maritime Transport - Marine Electrical Automation" (42525), 3.4. Teaching Staff, 3.4.1.).
Teaching staff involved in the implementation of the study programme are provided with regular opportunities for the improvement of their methodological and didactic skills and actively participate in training courses organised by the LMA Training Center (SAR, Study Programme "Maritime Transport - Marine Electrical Automation" (42525), 3.4. Teaching Staff, 3.4.1.), as also professional English language and instructor-evaluator courses. In overall, qualification enhancement is promoted both locally and internationally by LMA management.

2.4.2.
Teaching staff seems to be stable for a longer period of time taking into account their competences but considering also quite a high average age. Teachers are enthusiastic, they provide good support for the operation of the RTU LMA. However the total number of teaching staff involved in the study programme has been decreasing since 2019 from 33 in 2019 study year to 21 in 2021 study year, which is explained by the uncompetitive salary compared to the salaries of industry experts in the private sector. Despite this, the RTU LMA management believes that the provision of teaching staff to promote the quality and sustainability of the study programme "Maritime Transport - Marine Electrical Automation" is at a very good level. The interviews with teaching staff members confirmed that practising mariners who teach separate study courses from their main work in their free time are especially motivated. On the other hand, this creates complications in the process of planning study courses and dissatisfaction among students, because it is not always known in advance when the specific teaching staff will be dismissed from the ship and will be available to work at RTU LMA. Therefore, staff work in multiple jobs leads to overload and can also affect the quality of the teaching process.

2.4.3.

N/A

2.4.4.
15 from all teaching staff members have 110 publications in the last 6 years, mainly for professors, assoc. professors, docents and leading researchers. The rest of the teaching staff has more than 5 years of practical work experience in the industry, for example, in the position of captain, chief officer, senior ship inspector, etc. The analysis is based on the staff CV (II - Description of the Study Field - 2.3. Resources and Provision of the Study Field; Annex CV ENGv2.zip) and list of publications (II - Description of the Study Field - 2.4. Scientific Research and Artistic Creation; Annex Publications-Patents-Conferences ENG v2.zip).

2.4.5.
Interviews with teaching staff members confirmed that faculty collaborate with each other through various mechanisms (informal meetings of teaching staff, departmental meetings, discussions on study outcomes and quality assurance principles, and other events) established by the RTU LMA. At least once a month, structural unit meetings are organised to promote not only mutual communication between employees, but also to discuss current issues related to the study and scientific process (SAR, Study Programme "Maritime Transport - Marine Electrical Automation" (42525), 3.4. Teaching Staff, 3.4.5.). The improvement of study courses is based on the suggestions of both students and teaching staff and members of the state examination commission. The director of the study programme supports the initiative of the teaching staff in making various improvements to the content of the study programme.
In addition to that, the RTU LMA also has informal faculty meetings, which allow discussing current issues in an informal atmosphere (SAR, Study Programme "Maritime Transport - Marine Electrical Automation" (42525), 3.4. Teaching Staff, 3.4.5.), and then, in the event of a formal decision, inform the heads of the structural units about it and include the issue in the structural unit's meeting.
Besides that, RTU LMA plans to start a movement of pedagogues-mentors within the framework of which colleagues can share their experience and guide future teaching staff who want to join the RTU LMA family (SAR, Study Programme "Maritime Transport - Marine Electrical Automation" (42525), 3.4. Teaching Staff, 3.4.5.).

Conclusions on this set of criteria, by indicating strengths and weaknesses

Conclusions:
The qualification obtained by the teaching staff involved in the implementation of the study programme "Maritime Transport - Marine Electrical Automation" complies with the conditions for the implementation of the study programme and requirements of regulatory enactments. The qualification of the teaching staff is at a good level, but the scientific activities should be improved. RTU LMA takes the necessary steps to ensure that the changes in the number of teaching staff does not affect the quality of studies. Cooperation between the teaching staff and the director of the study programme is at a good level, which ensures the appropriate flow of information between the director of the study programme and the teaching staff.

Strengths:
1. Communication is at a good level between the staff and the study programme director.
2. Lecturers from maritime industry companies are involved in the study process.

Weaknesses:
1. Staff overload is possible for teaching staff trying to combine work at RTU LMA and one or more companies.

2. Reduction in the number of teaching staff.

Assessment of the requirement [7]

1 R7 - Compliance of the qualification of the academic staff and visiting professors, visiting associate professors, visiting docents, visiting lecturers and visiting assistants with the conditions for the implementation of the study programme and the requirements set out in the respective regulatory enactments.

Assessment of compliance: Fully compliant

Justification: The qualification of the teaching staff involved in the implementation of the study programme "Maritime Transport - Marine Electrical Automation" complies with the conditions for the implementation of the study programme "Maritime Transport - Marine Electrical Automation" and the requirements of regulatory enactments.

2.5. Assessment of the Compliance

Requirements

1 1 - The study programme complies with the State Academic Education Standard or the Professional Higher Education Standard

Assessment of compliance: Partially compliant

Annex (“P06_3.2.1_UCE0_42525_AtbilstibaValstsStandartam_ProfBak_LV_Jūras transports - kuģa elektroautomātika_ENGv2.docx”) confirms that the study programme complies with Cabinet Regulation No. 305 “Noteikumi par valsts profesionālās augstākās izglītības standartu”. Environment and Civil protection course (LJA558 Civil Protection) is included in the programme. However, module on entrepreneurial competencies, as mandated by standard (Article 22.1), is not well defined - it is not clear how required competencies (organization and establishment of companies, management methods, basics of project development and management, document and financial accounting systems, knowledge about fostering social dialogue in society) is met by programme. Study programme plan does not feature C (free elective) part.

2 2 - The study programme complies with a valid professional standard or the requirements for the professional qualification (if there is no professional standard required for the relevant occupation) provided if the completion of the study programme leads to a professional qualification (if applicable)

Assessment of compliance: Fully compliant

Annex (“ P07_3.2.1._JT-KM_BAK_Atb-Prof_Stand_LV.docx”) confirms that the programme complies with the professional standard “Marine Electromechanical Engineer” approved on 8. June, 2022.

3 3 - The descriptions of the study courses and the study materials have been prepared in all languages in which the study programme is implemented, and they comply with the requirements set forth in Section 561 , Paragraph two and Section 562 , Paragraph two of the Law on Higher Education Institutions.

Assessment of compliance: Fully compliant

Attached study course descriptions (“KEA(42525)-BAK-v2-SKA_EN.zip”) are prepared in Latvian and English. Descriptions comply with regulations set forth in Law on Higher Education Institutions.

4 4 - The sample of the diploma to be issued for the acquisition of the study programme complies with the procedure according to which state recognised documents of higher education are issued.

Assessment of compliance: Partially compliant

The provided Diploma sample (“KEA-bak-diploms&pielikumsv2ENG.zip”) partially complies with the procedure by which state-recognised documents of higher education are issued in accordance with Cabinet Regulation No. 202 “Kārtība, kādā izsniedz valsts atzītus augstāko izglītību apliecinošus dokumentus” as provided sample contains only 3rd page of diploma and supplement. Diploma supplement is outdated.

5 5 - The academic staff of the academic study programme complies with the requirements set forth in Section 55, Paragraph one, Clause 3 of the Law on Higher Education Institutions.

Assessment of compliance: Not relevant

6 6 - Academic study programmes provided for less than 250 full-time students may be implemented and less than five professors and associated professors of the higher education institution may be involved in the implementation of the mandatory and limited elective part of these study programmes provided that the relevant opinion of the Council for Higher Education has been received in accordance with Section 55, Paragraph two of the Law on Higher Education Institutions.

Assessment of compliance: Not relevant

7 7 - At least five teaching staff members with a doctoral degree are among the academic staff of an academic doctoral study programme, at least three of which are experts approved by the Latvian Science Council in the respective field of science. At least five teaching staff members with a doctoral degree are among the academic staff of a professional doctoral study programme in arts (if applicable).

Assessment of compliance: Not relevant

8 8 - The teaching staff members involved in the implementation of the study programme are proficient in the official language in accordance with the regulations on the level of the official language knowledge and the procedures for testing official language proficiency for performing professional duties and office duties.

Assessment of compliance: Fully compliant

Attached resumes of staff (“CV ENGv2.zip”) and confirmation (“Confirmation - knowledge of the state language.edoc”) verifies that state language proficiency is compliant with Cabinet Regulation No. 733 "Noteikumi par valsts valodas zināšanu apjomu, valsts valodas prasmes pārbaudes kārtību un valsts nodevu par valsts valodas prasmes pārbaudi".

9 9 - The teaching staff members to be involved in the implementation of the study programme have at least B2-level knowledge of a related foreign language, if the study programme or any part thereof is to be implemented in a foreign language (if applicable).

Assessment of compliance: Fully compliant

Attached resumes of staff (“ CV ENGv2.zip”) and confirmation (“Confirmation - knowledge of the foreign language.edocs”) verifies that language proficiency in English is at least B2.

10 10 - The sample of the study agreement complies with the mandatory provisions to be included in the study agreement.

Assessment of compliance: Fully compliant

Sample of attached study agreement (“ Sample_of_study_agreement.zip”) complies with Cabinet Regulation No. 70 "Studiju līgumā obligāti ietveramie noteikumi”.

11 11 - The higher education institution / college has provided confirmation that students will be provided with opportunities to continue their education in another study programme or another higher education institution or college (agreement with another accredited higher education institution or college) if the implementation of the study programme is terminated.

Assessment of compliance: Fully compliant

Attached contracts ("Līgumi par studiju parnemšanu ENG.zip") confirms that the institution provides the possibility to continue studies within the following option: Lithuanian Maritime Academy professional bachelor programme "Marine Electrical and Electronics Engineering".

12 12 - The higher education institution / college has provided confirmation that students are guaranteed compensation for losses if the study programme is not accredited or the study programme's license is revoked due to the actions (actions or omissions) of the higher education institution or college and the student does not wish to continue studies in another study programme.

Assessment of compliance: Fully compliant

RTU confirmation ("Confirmation - on compensation for losses.edoc") states, that students are guaranteed compensation for losses if the study programme is not accredited or the licence of the study programme is revoked due to the actions of the college (actions or failure to act) and the student does not wish to continue the studies in another study programme.

13 13 - The joint study programmes comply with the requirements prescribed in Section 55.(1), Paragraphs one, two, and seven of the Law on Higher Education Institutions (if applicable)

Assessment of compliance: Not relevant

14 14 - Compliance with the requirements specified in other regulatory enactments that apply to the study programme being assessed (if applicable)

Assessment of compliance: Fully compliant

Annex ("Atbilstība atbilstošās nozares specifiskajam normatīvajam regulējumam v2.docx") confirms, that programme complies with STCW Convention and relevant EU and Latvian regulatory requirements such as Directive (EU) 2022/993 of the European Parliament and of the Council of 8 June 2022 on the minimum level of training for seafarers, Maritime Administration and Marine Safety Law (LV), Regulations Regarding the Medical Fitness of Seafarers for Work on a Ship (LV), Regulations Regarding Certification of Seafarers (LV), Regulations Regarding Certification, Implementation, and Monitoring of Professional Training Programmes for Seafarers (LV).

Assessment of the requirement [8]

1 R8 - Compliance of the study programme with the requirements set forth in the Law on Higher Education Institutions and other regulatory enactments.

Assessment of compliance: Partially compliant

Study programme generally complies with regulatory enactments. Provided diploma sample is only partial and diploma supplement is outdated. Programme does not feature (free elective) parts. The Module on entrepreneurial competencies is not well defined.

General conclusions about the study programme, indicating the most important strengths and weaknesses of the study programme

RTU LMA Maritime Transport (Marine Electrical Automation) programme will produce a professionally

competent workforce for the maritime sector. The need for such a programme is well defined and is very much in keeping with those delivered by other Maritime training and education settings around the world, particularly those that provide similar maritime education study programmes. Although participant numbers have been falling in number since 2018/19, this new revitalised programme should go some way towards improving recruitment and retention. As stated, the employment indicators have been fully analysed and remain strong. Feedback obtained from former students (alumni) and shipping industry employers clearly indicated that this programme generates particularly good graduates professionally prepared for their first job at sea.
The overarching design of this programme is strong, well thought out and is consistent with its stated aims. The compulsory professional courses are all delivered to an international level of competence appropriate for the professional nature of the programme. The final assessment of the programme includes the preparation and defence of a diploma thesis, and a Maritime English Examination and Qualification examination in accordance with STCW and VSIA. This assessment approach is essential and entirely appropriate for this level of study. The programme also meets all STCW requirements and IMO standards. Some additional work by the programme team is required to show full equivalence with the learning areas defined by the EQF. The merger of LMA with RTU has provided both institutions with the opportunity to develop additional professional training, and this coupled with LMA's established reputation as a premier Maritime Training Academy, bodes well for the future.
In general, the qualification obtained by the teaching staff involved in the implementation of the study programme complies with the conditions for the implementation of the study programme and requirements of regulatory enactments. The qualification of the teaching staff is at a good level, but the scientific activities should be improved, as they can only be observed for 1/3 of the teaching staff. LMA takes the necessary steps to ensure that the changes in the number of teaching staff does not affect the quality of studies. Cooperation mechanism between teaching staff, as well as information flow between StP director and teaching staff are good.

Strengths
1. The LMA has an established reputation within Latvia as the premier Maritime Training Academy. This reputation must not be lost as the merger with RTU matures. It is a particular strength that could be exploited to recruit international maritime students.
2. The use of returning experienced seafaring alumni, with suitable up-to-date industry knowledge, to instruct current students is very beneficial to the student's professional development.
3. The number of different course delivery formats currently provides good programme flexibility. However, the careful management of these flexible approaches is essential to minimise potential programme completion delays.
4. Feedback obtained from alumni and employers confirmed that the delivery of this programme provided excellent professional preparation for a first sea job.
5. The assessment of the programme learning outcomes is effective and makes beneficial use of a number of different assessment strategies, including assessed practical work, examinations, and the oral defence of project work.
6. Good communication between staff and study programme director.
7. Lecturers representing industry are involved in the study process.

Weaknesses
1. The programme team should develop a more visible strategy to provide greater student pastoral support, and to promote student wellbeing whilst they are engaged in their studies.
2. The ongoing reduction in student numbers in maritime engineering programmes should be managed as a matter of urgency. To facilitate this, a suitable student recruitment strategy should be developed and implemented as soon as possible.

3. Feedback from former students suggests that the programme curriculum would benefit from the inclusion of important “soft” management skills such as communication, leadership, conflict resolution and adaptability (recommendations section 1.5).
4. The preparation delivered prior to sea practice is variable in quality and often poorly attended by students. Student attendance at this preparation activity should be compulsory.
5. Staff overload is possible for teaching staff trying to combine work at RTU LMA and one or more companies.
6. Reduction in the number of teaching staff.

Evaluation of the study programme "Maritime Transport - Marine Electrical Automation"

Evaluation of the study programme:

Good

2.6. Recommendations for the Study Programme "Maritime Transport - Marine Electrical Automation"

Short-term recommendations

1. Slight improvement of technical provisions for the study process is needed, for instance, life electrical equipment used onboard the ships (diesel generator synchronisation stands).
2. Ensure that programme includes free elective (C) part as required by Law on Institutions of Higher Education.
3. Define modules or courses regarding entrepreneurial skills as required by state professional education standards.
4. Provide a full diploma example with an updated supplement.

Long-term recommendations

1. Director of the study programme should develop a more visible strategy to provide greater student pastoral support, and to promote student wellbeing whilst they are engaged in their studies.
2. Director of the study programme should pay attention to the maximum involvement of all staff in various scientific activities (writing publications, participating in projects, etc.) trying to find the potential contribution of each employee.
3. Director of the study programme should control the workload of the teaching staff in order to avoid a decrease in the quality of teaching.
4. Develop and implement a suitable student recruitment strategy due to an ongoing reduction in student numbers.
5. The preparation delivered prior to sea practice is variable in quality and often poorly attended by students. Student attendance at this preparation activity should be compulsory.
6. Necessity to increase/double the number of state financed budget places.
7. Necessary to update relevant equipment for the practical part of the study programme “Maritime Transport - Marine Electrical Automation”.

II - "Maritime Transport - Marine Engineering" ASSESSMENT

II - "Maritime Transport - Marine Engineering" ASSESSMENT

2.1. Indicators Describing the Study Programme

Analysis

2.1.1.

As described the programme aims and objectives (SAR p.171) are very clear and well-articulated and relate directly to the specified mission and stated vision of the Latvian authorities (SAR pp.169-172). In addition, there is clear evidence throughout the Maritime Transport - Marine Engineering programme documentation of a thorough, and ongoing, training needs analysis having been conducted in a professional manner and pertaining to the maritime engineering context. This is apparent in the renaming of the titles of a good number of programme courses which have been developed, and also in the comprehensive statement of the learning outcome statements in the programme documentation. A particular strength here is the regard paid to the delivery of STCW requirements with the incorporation of the essential Manila Amendments (SAR p.169).

Programme Viability and Rationale

The professional maritime focus of the programme fully meets the specific needs of STCW, the International Convention on the “Standards of Training, Certification and Watchkeeping” at the level of 2nd or Chief Engineer. The programme is also in keeping with the European Qualification Framework (EQF) (http://www.enaee.eu/) for study at level 6 and makes good use of suitable IMO model course materials. For example IMO Model Course 7.02 "Chief Engineer Officer and Second Engineer Officer" and IMO Model Course 7.04 "Officer In Charge Of An Engineering Watch," (https://www.imo.org/en/OurWork/HumanElement/Pages/ModelCourses.aspx). The programme will develop suitably educated, highly skilled and technologically competent engineers for employment in the marine engineering sector. The need for such a programme, when viewed in this context, is obvious and is well described throughout the provided documentation. The programme approach is very definitely in keeping with other University and College settings around the world, particularly those providing equivalent professional maritime engineering training programmes and opportunities.

2.1.2.

The duration and scope of the study programme implementation (including different study programme implementation options), as well as the implementation language, are reasonable and justified.

The name of the study programme corresponds to the code 42525 of the study programme according to Latvian Education Classification (Latvian Cabinet of Ministers Regulations No 322), meaning that first two digits “42” notes that the study programme is second level professional higher education study programme (level 6 of Latvian and European Qualification Framework) and the last three digits “525” notes the study programme belongs to the programme in “Mechanical Engineering (Mechanical Vehicles, Ships and Aircraft)”. Consequently, the awarded degree “Professional Bachelor Degree in Maritime Transport” and qualification “Marine engineer (management level)” corresponds to the study programme code and title. Furthermore, it can be pursued after obtaining general or vocational secondary education. The duration of full-time studies is four years and three months.

Furthermore, the professional nature of the programme and the qualification corresponds with the Regulation of Cabinet of Ministers of 13 June 2023 No 305 "Regulations on the State Standard for Professional Higher Education" (https://likumi.lv/ta/id/342818-noteikumi-par-valsts-profesionalas-augstakas-izglitibas-standartu (SAR, Compliance with the study programme with the State Education Standard – Annex,

P06_3.2.1_JT-KM_BAK_Atbilst-Valsts-Stand_ENG.docx).

Programme Title
The programme title is appropriate and clearly defines the intention of this professional maritime engineering programme of study to produce high quality management-level specialists for employment in the maritime sector at an international level.

Benchmarking and Quality Framework Alignment
From the programme documentation provided it is very clear that all constituent course materials have been suitably benchmarked against the STCW-78 standards required for the profession of Chief Engineer Officer And Second Engineer Officer and Officer In Charge Of An Engineering Watch. As stated previously they are also in line with IMO and the EQF Level 6 requirements. The overarching academic and quality assurance framework is defined to good effect within other parts of the documentation supplied.

Duration
This suitably flexible programme can be studied on both a part-time (5 years extra mural) or a full-time (4 years 3 months) basis (SAR p.168-169). These approaches are to be commended and hopefully will improve the level of student uptake (recruitment), retention and participation.
Admission criteria for both study modes - full-time and part-time - includes a valid medical certificate issued by a maritime doctor confirming fitness for work on a ship as mandated by Latvian regulatory enactments. Applicants must have a secondary education diploma. Additionally, English language proficiency is evaluated in accordance with the applicable regulatory standards. Study programme features budget-funded places while annual tuition fee for full-time programme is EUR 4670 and for part-time - EUR 3740. (https://www.rtu.lv/lv/studijas/visas-studiju-programmas/atvert/UCN?department=0J000&type=P)
Admission requirements are reasonable.

2.1.3.
The RTU Quality Team during the interview acknowledged that the merger of RTU and LMA has posed one or two small issues which are being dealt with by way of a continuous improvement process. However, overall the quality assurance processes are considered to have merged effectively, with more positive gains than negative losses. In addition, in the context of best practice the institution, which is delivering a potentially fully accredited maritime engineering degree programme, should be seen to more clearly promote equality, diversity and inclusion in line with applicable national charters (https://www.diversity.lv/dazadibas-harta/), and international frameworks (https://unglobalcompact.org/take-action/action/dei). It is suggested that the course team give further thought to improving these aspects by including a statement of intent in future programme documentation.

2.1.4.
Feedback obtained during interviews from alumni suggested that the delivery of the LMA marine engineering programmes provided an excellent professional preparation for a first job at sea. This aspect is also to be commended for the very strong links which were demonstrated during interviews with local shipping employers. However, recruitment to full-time study of this programme is poor with student numbers declining consistently over the last few years (SAR p.175). Consequently, this issue could potentially cause the closure of the programme if it is not suitably addressed as a matter of urgency. To improve the situation it is suggested that a new, modern student recruitment strategy, perhaps one utilising the many social media tools available, requires implementation as soon as possible.

2.1.5.
N/A

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:
The aim of this important programme to produce a professionally competent workforce for the maritime sector is well achieved and is very much in keeping with those delivered by other University and College settings around the world. Although participant student numbers have been falling in number since 2018/19, this revitalised programme should improve recruitment and retention. All employment indicators have fully analysed and remain strong. Feedback obtained from alumni and shipping industry employers confirms that this programme develops particularly good graduates well prepared for their first professional job at sea.

Strengths:
1. The overarching design of the Maritime Transport - Marine Engineering programme is strong and is consistent with the needs of the maritime industry. The compulsory professional courses, and their logical sequencing, is a positive indicator of good practice.
2. The merger of LMA with RTU has provided the University with the additional resources to deliver all required STCW professional courses (including safety training). This resource could provide excellent income generation opportunities.

Weaknesses:
1. The ongoing reduction in student numbers in maritime engineering programmes must be addressed as a matter of urgency. To facilitate this a suitable student recruitment strategy must be developed and implemented as soon as possible.

2.2. The Content of Studies and Implementation Thereof

Analysis

2.2.1.
Course Content
The overarching design of the curriculum is very thorough. The compulsory study courses, and their logical sequencing, are appropriate and cover the core functions carried out by a ship's engineer as defined in the STCW code requirements. This was confirmed in the programme documentation (SAR p.171) and with the institution staff during the interview. As stated previously, the programme makes good use of IMO model courses which include the latest STCW professional requirements, and the wider developmental needs of the maritime sector. (https://www.imo.org/en/ourwork/humanelement/pages/stcw-conv-link.aspx). Strengthening changes have been made to a number of important curriculum study areas. It is clear that continuous course development, and appraisal, is conducted on a regular basis, confirmed during discussions with the Quality Assurance staff. To be commended here is the inclusion of the important area of Cyber security (SAR p.176), although further extension to include generative artificial intelligence systems should be considered in future developments of the programme. (https://www.maritime-cybersecurity.com/Maritime_Cybersecurity_Links.html). In addition, in the context of best practice the institution, as one offering a fully accredited maritime degree programme, more attention should be paid to promoting equality, diversity and inclusion in line with applicable national charters (https://www.diversity.lv/dazadibas-harta/) , and international frameworks (https://unglobalcompact.org/take-action/action/dei)
The annex ("P06_3.2.1_JT-KM_BAK_Atbilst-Valsts-Stand_ENG.docx") confirms that the study

programme generally complies with the requirements of Cabinet Regulation No. 305, titled “Noteikumi par valsts profesionālās augstākās izglītības standartu” (“Regulations on the National Professional Higher Education Standard”). Notably, the study programme includes the Environment and Civil Protection courses. However, there are concerns regarding the inclusion of modules on entrepreneurial competencies as mandated by Article 22.1 of the Standard. The regulation requires that programmes in mandatory part must include competencies, such as the organization and establishment of companies, management methods, the basics of project development and management, document and financial accounting systems, and knowledge of fostering social dialogue within society. It is unclear how the study programme addresses or integrates these competencies. The programme documentation does not provide sufficient detail to demonstrate how these outcomes are achieved within the existing curriculum structure by providing following mandatory courses: Maritime Economics – 1 CP/ 1.5 ECTS. Maritime Economics - course project – 1 CP/ 1.5 ECTS, Quality Management in Maritime Transport – 1 CP/ 1.5 ECTS, Engine Resource Management – 2 CP/ 3 ECTS, Labour Safety and Legislation on Ships – 2 CP/ 3 ECTS, Maritime Law – 2 CP/ 3 ECTS. Furthermore, the study programme plan does not include a free elective - C - part, therefore some further clarifications are needed.

2.2.2.
N/A

2.2.3.
Implementation and Delivery
A clear, and coherent, structure is presented, and the statements made in the programme descriptors effectively specify the indicative syllabus content (SAR p.178). This approach should facilitate the development, achievement and the recording of the skills, knowledge and competences achieved during study of the programme. A variety of suitable teaching and assessment approaches are described in the programme documentation (SAR p.177). These are entirely suitable to a professional Maritime Transport - Marine Engineering programme of this type. As stated earlier the programme makes good use of appropriate IMO model courses which fully support and develop STCW professional requirements. In addition, this suitably flexible programme can be studied on a full-time (4 years and 3 months) or a part-time (5 years) extramural basis. A modern online teaching delivery approach is embraced to good effect to allow the part-time study basis. The courses can also be studied in English or Latvian. This bilingual approach is to be commended and will surely maintain a suitable level of local, and international, student uptake and participation. The use of returning experienced seafaring engineers, with up-to-date industry technical knowledge and competence, to teach current students is a real strength in this programme. However, care must be taken to ensure that these returning potential lecturers have the suitable professional experience (at least 5 years or more) to contribute effectively to the students' engineering development. They should also be provided with a short course, where this exists, on good classroom teaching techniques to ensure an effective student learning experience.
(In case of a joint study programme, or in case the study programme is implemented in a foreign language or in the form of distance-learning, analyse in detail the methods used for the implementation of such a study programme).
Study Provision and English Program Support
It is stated in the SAR (p.168-169) that the programme can be studied over 5 years both in Latvian and English. Despite this assertion no real details are provided on how this extramural study approach is implemented and supported. Given that the proportion of students following this route, which make up approximately one third of the total (SAR pp.174-175), this is a worrying omission. It would appear for the interviews with staff that theoretical study is carried out on an ad-hoc basis with attendance required for practical activities. Staff managing this programme should develop a

more formalised , and suitable, study strategy for these part-time students. (https://jime.open.ac.uk/articles/10.5334/jime.470)
The documentation provided also states (SAR p.179) that the programme is designed to be delivered in English. This initiative is to be applauded and should support international student recruitment beneficial to the severely dwindling student numbers on the programme. However, the SAR provides very little detail regarding how the English programmes will be operationally delivered and assessed. It is suggested that the course team fully develop a suitable and robust strategy for this delivery mode.

2.2.4.
If the study programme is implemented in a foreign language, provide an assessment of the provision of internship in a foreign language, including for foreign students.
Practical Learning Strategies
As described the proposed use of engine room simulators, workshop practice and other safety training opportunities (SAR p.183) gives a strong indication of good modern hands-on teaching practices being utilised effectively. In addition, the six month on board engine room residency requirement, for full certification, is a particular strength of this very professional programme. The use of returning experienced seafaring alumni, with up-to-date industry knowledge, to teach current students, is also beneficial in this respect. It is clear here that this practical learning aspect of the programme has been fully developed, with full sector support, and is being implemented to good effect. This important STCW certification requirement, and sector input, must be maintained as a cornerstone of this study programme. In addition, the merger of LMA with RTU has provided both institutions with the opportunity for the development of additional professional and educational training programmes. To further support these practical study initiatives, the merger of RTU LMA has provided access to additional technical laboratories and facilities (SAR p.186). This bodes well for the future development of this programme. The requirement for, and importance of, these practical opportunities for the successful delivery of marine engineering programmes must not be understated. Therefore, the maintenance and continual improvement of these activities must remain of paramount importance to the course delivery team going forward programme.

2.2.5.
N/A

2.2.6.
The requirement for a final thesis (SAR p.178) is a recognised strength of the program and should effectively ensure that a graduating student has met all the requisite learning outcomes and has proven the necessary skills and competences required for initial employment in the maritime sector. Student thesis examples, provided in the SAR (pp.181-182), demonstrate a range of topics aimed at skill and competence development. This is to be commended. However, in this context, it is suggested that for future accreditation that the following elements be included for evaluation:
- student project handbook detailing learning outcomes and assessment criteria
- a representative sample of thesis reports (as was done here)

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:
This professional Maritime Transport - Marine Engineering programme will produce a competent and effective workforce for the maritime sector. It fully meets STCW requirements and although participant numbers have continued to fall since the last accreditation visit, this new revitalised programme should go some way towards improving recruitment and retention. The employment

indicators have been fully analysed and remain strong and, as stated earlier, feedback obtained from former students and shipping industry employers indicated that this programme delivers strong graduates fully, and professionally, prepared for their first job at sea. The merger of LMA with RTU has provided both institutions with the opportunity for additional professional and educational training programmes. This coupled with LMA's established reputation as a premier Maritime Training Academy bodes well for the future. The intention that the programme be also delivered in English should increase international student recruitment, thus maintaining its viability in the future.

Strengths:
1. The use of returning experienced seafaring alumni, with up-to-date industry knowledge, to teach current students, is beneficial to the students professional development.
2. The professional maritime focus of the programme fully meets the specific needs of STCW (Convention on Standards of Training, Certification, and Watchkeeping) and the IMO (International Maritime Organisation). The Marine Navigation - Marine Engineering programme is in keeping with the appropriate levels of the Framework for Qualifications (EQF) in the European Higher Education Area.

Weaknesses:
1. RTU LMA should develop a more robust strategy to provide student pastoral support and to promote student wellbeing whilst they are engaged in their studies.
2. Study programme plan does not feature a free elective - C - part.
3. Modules and/or courses on entrepreneurial competencies are not well defined.

Assessment of the requirement [5] (applicable only to master's or doctoral study programmes)

1 R5 - The study programme for obtaining a master's or doctoral degree is based on the achievements and findings of the respective field of science or field of artistic creation.

Assessment of compliance: Not relevant

2.3. Resources and Provision of the Study Programme

Analysis

2.3.1.
Taking into account the opinion received from the Registry of Seamen and results of the interviews with the teaching staff involved and the Director of Engineering programmes, it was observed that the study provisions as well as material and technical provisions of the study programme "Maritime Transport - Marine Engineering (42525)" are compliant with the relevant requirements of the STCW Convention and Code to ensure achievement of the learning outcomes. However in this respect it's important to highlight that the information included in the SAR is not reflecting properly the current situation with material and technical provisions as the LMA has moved to the new premises in the campus of RTU. For instance, SAR mostly contains the descriptions and relevant information regarding laboratories and technical infrastructure located in the old premises.
During the tour of facilities the experts had an opportunity to see the different simulators and laboratories used in the implementation of the study programme. For the achievement of learning outcomes according to the STCW Code standards A-III/1 and A-III/2 in the function "Operation and Management of Machinery and Engineering Systems" UNITEST Engine Room Simulator with high level of functionality (Medium speed Engine, Low Speed Engine, Gas Turbine propulsion etc.) manly is used. Students also have access to the Ship Dual-Fuel Engine and Liquefied Cargo Simulator

Laboratory. (SAR p.183.)
According to SAR p.183, the following basic laboratories and workshops are available for marine engineering students:
- The Electromechanical workshop is designed for the repair and diagnostics of electric equipment such as motors, generators and power electronics using soldering and assembly equipment, as well as for practical use of electrical measurement instruments, including multimeters, meggars, and oscilloscopes.
- The Ship Control Systems Laboratory is equipped with modern pneumatic and hydraulic stands, programmable logic controllers, analog control system training stands, and ship propeller simulation equipment. These facilities allow students to acquire theoretical knowledge and practically verify it.
- The Electronics and Electrical Engineering Laboratory is fully equipped with all the necessary measurement and diagnostic instruments, as well as soldering equipment and magnifying glasses. This laboratory provides students with the opportunity to learn the basics of electrical engineering and electronics using training kits from Lukas Nulle and K&H, as well as ARDUINO, ESP32, and PIC training platforms.
- The Electric Machines Laboratory is equipped for students to gain practical experience in electromechanical converters and their operating principles.
- The High Voltage Equipment Laboratory is fully equipped with high voltage switching devices and all necessary safety equipment. This laboratory provides students with the opportunity to learn safety measures while working with high voltage switching devices, offering them the necessary theoretical and practical training.
Compulsory STCW short training courses are conducted both in the premises of the Training Center in the RTU campus and on the pontoon "Kadets," which is equipped with specialized technical equipment corresponding to the specific course programme approved by the Registry of Seamen (e.g., lifeboats, life rafts, firefighting equipment, towing and mooring devices, first aid kits etc.).
During the on-site visit experts gathered confirmation that the students and teaching staff have an access to subscribed databases for studying and research purposes, including:
- EBSCO: Access to full-text and review databases in the humanities, social sciences, and exact sciences. Collection: National package Academic Search Complete.
- EBSCO: INSPEC: Access to full-text database in the exact sciences.
- KR - CON:2: Access to a subscription code for a specialised maritime regulatory document database.
- International Maritime Organization (IMO): Database of current IMO documents.
It's important to mention that RTU Library provides access to previous years' students' theses/projects, methodological materials prepared by RTU LMA teaching staff and the latest navigation publications and textbooks relevant to the study programme.
All necessary study materials, including course descriptions, are uploaded to the study e-platform OMARS. The platform is regularly updated to ensure convenient access to study materials for both teaching staff and students.

2.3.2.
N/A

2.3.3.
According to SAR p.187, funding for the study programme “Maritime Transport - Marine Engineering (42525)” includes:
- Grant or core budget funding (state budget funding for student training)
- Fee-paying student funding (both full-time on-site and part-time off-site fee-paying student
- training, as well as fees for retaking exams);
- Performance funding (funding for scientific support)

- Funding for research infrastructure.

The funding allocated from the state budget for the implementation of the study programme per student is in 2022 - 2771.19 EUR, in 2023 - 3596.47 EUR. RTU LMA agreed with the Ministry of Education and Science to increase the budget funding per student by reducing the number of budget places. Compared to 2015, the number of budget places decreased from 77 to 50 in 2023. (SAR p.188) In addition to the state budget-funded study places, the study program's funding also includes tuition fees from individuals or legal entities. The funding from fee-paying students is used for the renewal of material and technical resources, attracting higher-level specialists to ensure the study process, etc. The tuition fee per student for the study programme "Maritime Transport-Marine engineering" is 3,520 EUR per year. From experts' opinion the reduction of the state budget has left a negative impact on the number of enrolled students in recent years.

In addition to the state budget-funded study places, the study programme is also financed by the income from fee-paying students, whether they are individuals or legal entities. There is a tendency for an increase in the number of fee-paying students. The funding from fee-paying students is used for the renewal of material and technical support, attracting higher-level specialists to ensure the study process, and other purposes. The tuition fee for the study programme “Maritime Transport - Marine Engineering is EUR 3520 per year per student. (SAR p.188.)

Taking into account the above mentioned, experts are of the opinion that the financial resources available for the implementation of the study programme mostly are sufficient. However there is also need for extra funding to develop the specific material technical provisions of the study programme, for instance, diesel engine and auxiliary machinery laboratory.

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:

The funding available for the implementation of the study programme "Maritime Transport-Marine engineering" is sufficient to ensure the part time and full time study process. Study infrastructure, equipment, and simulators available for the study programme are modern and correspond to the goals and planned results of the programme. However there is still a slight need to improve the technical provisions in the respect of the practical part of the study programme. For instance, use of elements of auxiliary machinery in the practical tasks are highly advisable.

Strengths:

1. Well organised and equipped mechanical and welding workshops.

Weaknesses:

1. Relatively small number of state financed budget places.
2. Slight improvement of technical provisions is needed to ensure for study process needs For instance, life equipment used on board the ships (such as purifiers, different type pumps etc.) are highly recommended for practical tasks.

Assessment of the requirement [6]

1 R6 - Compliance of the study provision, science provision (if applicable), informative provision (including library), material and technical provision and financial provision with the conditions for the implementation of the study programme and ensuring the achievement of learning outcomes

Assessment of compliance: Fully compliant

Justification: The funding available for the implementation of the study programme is sufficient to ensure achievement of the learning outcomes, namely, financial provision comply with

specific features and the conditions for the implementation of the study programme. Study infrastructure, equipment and simulators available for the study programme “Maritime Transport - Marine Engineering” are modern and correspond to the goals and planned results of the programme.

2.4. Teaching Staff

Analysis

2.4.1.
The qualification obtained by the teaching staff involved in the implementation of the study programme "Maritime Transport - Marine Engineering" complies with the conditions for the implementation of the study programme and the requirements of regulatory enactments, where the teaching staff consists of professors and lecturers with a doctoral degree and master's degree, each of whom is an expert in their field. The education obtained for all teachers is practically directly related to the specific field of science. In accordance with the objectives of the study programme, the primary criteria for selecting teaching staff are: (a) knowledge of the latest technologies and participation in scientific and research projects in their respective fields, (b) pedagogical skills relevant to contemporary trends in the respective field, and (c) experience in delivering courses to international students in English.
The implementation of the study programme delivery of intended learning outcomes are ensured by the academic staff of RTU LMA - professors and lecturers with doctoral and master's degrees. If necessary, it is planned to attract teaching staff from the Lithuanian Maritime Academy, as well as industry professionals and working seafarers to ensure the study programme “Maritime Transport - Marine Engineering”. The selection of guest lecturers is based on the existence of a scientific degree in engineering and work experience working on ships or in the maritime industry (SAR, Study Programme "Maritime Transport - Marine Engineering" (42525), 3.4. Teaching Staff, 3.4.1.).
Teaching staff involved in the implementation of the study programme “Maritime Transport - Marine Engineering” are provided with regular opportunities for the improvement of their methodological and didactic skills and actively participate in training courses organised by the LMA Training Center, as also professional English language and instructor-evaluator courses. In overall, qualification enhancement is promoted both locally and internationally by RTU LMA management.

2.4.2.
The academic staff has not changed much in the last 3 years and consists of 39 lecturers; the number of guest lecturers has increased slightly (SAR, StudyProgram "Maritime Transport - Marine Engineering" (42525), 3.4. Teaching Staff, 3.4.2.). The selection of teachers of conventional subjects takes place in accordance with the LJA KVS P2-2 procedure (SAR, Study Programme "Maritime Transport - Marine Engineering" (42525), 3.4. Teaching Staff, 3.4.2.). Engineer assessors certified by the Seamen's Register are involved in the work, which allows for continuous improvement of the teaching materials of conventional subjects. In general, RTU LMA tries to attract teaching staff with already existing experience in the maritime industry in relation to the mechanical and technical part of the ship, thereby achieving a beneficial effect on the acquisition of knowledge in the practical aspects of subjects (modules), improving and increasing the level of knowledge. At the same time staff employment in multiple jobs leads to overload and can also affect the quality of the teaching process. Teachers are enthusiastic, they provide good support for the operation of the RTU LMA.

2.4.3.
N/A

2.4.4.

13 of all staff members have 78 publications in the last 6 years, mainly for professors, assoc. professors, docents and leading researchers. The rest of the teaching staff has more than 5 years of practical work experience in the industry, for example, in the position of officers or inspectors, etc. The analysis is based on the staff CV (II - Description of the Study Field - 2.3. Resources and Provision of the Study Field; Annex CV ENGv2.zip) and list of publications (II - Description of the Study Field - 2.4. Scientific Research and Artistic Creation; Annex Publications-Patents-Conferences ENG v2.zip).

2.4.5.
Interviews confirmed that faculty collaborate with each other through various mechanisms (informal meetings of teaching staff, departmental meetings, discussions on study outcomes and quality assurance principles, and other events) established by the RTU LMA. At least once a month, structural unit meetings are organised to promote not only mutual communication between employees, but also to discuss current issues related to the study and scientific process. The improvement of study courses is based on the suggestions of both students and teaching staff and members of the state examination commission.
In addition to that, the RTU LMA also has informal faculty meetings, which allow discussing current issues in an informal atmosphere, and then, in the event of a formal decision, inform the heads of the structural units about it and include the issue in the structural unit's meeting (SAR, Study Programme "Maritime Transport - Marine Engineering" (42525), 3.4. Teaching Staff, 3.4.5.).
Besides that, RTU LMA plans to start a movement of pedagogues-mentors within the framework of which colleagues can share their experience and guide future teaching staff who want to join the RTU LMA family (SAR, Study Programme "Maritime Transport - Marine Engineering" (42525), 3.4. Teaching Staff, 3.4.5.).

Conclusions on this set of criteria, by indicating strengths and weaknesses

Conclusions:
The qualification of the teaching staff involved in the implementation of the study programme complies with the conditions for the implementation of the study programme and requirements of regulatory enactments. The qualification of the teaching staff in general is on a good level, but the scientific activities should be improved, as they can only be observed for 1/3 of the teaching staff. RTU LMA takes the necessary steps to ensure that the changes in the number of teaching staff does not affect the quality of studies. Staff actively participate in training courses organised by the RTU LMA Training Center. Cooperation between the teaching staff and the director of the study programme is at a good level, which ensures the appropriate flow of information between the director of the study programme and the teaching staff.

Strengths:
1. Communication is at a good level between the staff and the study programme director.
2. Lecturers from maritime industry companies are involved in the study process.

Weaknesses:
1. Staff overload is possible for teaching staff trying to combine work at RTU LMA and one or more companies.

Assessment of the requirement [7]

1 R7 - Compliance of the qualification of the academic staff and visiting professors, visiting associate professors, visiting docents, visiting lecturers and visiting assistants with the conditions for the implementation of the study programme and the requirements set out in the respective regulatory enactments.

Assessment of compliance: Fully compliant

Justification: The qualification of the teaching staff involved in the implementation of the study programme complies with the conditions for the implementation of the study programme and the requirements of regulatory enactments.

2.5. Assessment of the Compliance

Requirements

1 1 - The study programme complies with the State Academic Education Standard or the Professional Higher Education Standard

Assessment of compliance: Partially compliant

Annex (" P06_3.2.1_JT-KM_BAK_Atbilst-Valsts-Stand_LV.docx") confirms that the study programme complies with Cabinet Regulation No. 305 "Noteikumi par valsts profesionālās augstākās izglītības standartu". Environment and Civil protection course (LJA558 Civil Protection) is included in the programme. However, module on entrepreneurial competencies, as mandated by standard (Article 22.1), is not well defined - it is not clear how required competencies (organization and establishment of companies, management methods, basics of project development and management, document and financial accounting systems, knowledge about fostering social dialogue in society) is met by programme. Study programme plan does not feature C (free elective) part.

2 2 - The study programme complies with a valid professional standard or the requirements for the professional qualification (if there is no professional standard required for the relevant occupation) provided if the completion of the study programme leads to a professional qualification (if applicable)

Assessment of compliance: Fully compliant

Annex (" P07_3.2.1._KEA_AtbProfStand_ENGv2.docx") confirms that the programme complies with the professional standard "Marine Engineer" approved on 10 June, 2023

3 3 - The descriptions of the study courses and the study materials have been prepared in all languages in which the study programme is implemented, and they comply with the requirements set forth in Section 561 , Paragraph two and Section 562 , Paragraph two of the Law on Higher Education Institutions.

Assessment of compliance: Fully compliant

Attached study course descriptions ("JT-KM_BAK_SKA_LV.zip") are prepared in Latvian and English. Descriptions comply with regulations set forth in Law on Higher Education Institutions.

4 4 - The sample of the diploma to be issued for the acquisition of the study programme complies with the procedure according to which state recognised documents of higher education are issued.

Assessment of compliance: Partially compliant

The provided Diploma sample (" KM-BAK-diploms&pielikumsLV.zip") partially complies with the procedure by which state-recognised documents of higher education are issued in accordance with Cabinet Regulation No. 202 "Kārtība, kādā izsniedz valsts atzītus augstāko izglītību apliecinošus dokumentus" as provided sample contains only 3rd page of diploma and supplement. Diploma supplement is outdated.

5 5 - The academic staff of the academic study programme complies with the requirements set forth in Section 55, Paragraph one, Clause 3 of the Law on Higher Education Institutions.

Assessment of compliance: Not relevant

6 6 - Academic study programmes provided for less than 250 full-time students may be implemented and less than five professors and associated professors of the higher education institution may be involved in the implementation of the mandatory and limited elective part of these study programmes provided that the relevant opinion of the Council for Higher Education has been received in accordance with Section 55, Paragraph two of the Law on Higher Education Institutions.

Assessment of compliance: Not relevant

7 7 - At least five teaching staff members with a doctoral degree are among the academic staff of an academic doctoral study programme, at least three of which are experts approved by the Latvian Science Council in the respective field of science. At least five teaching staff members with a doctoral degree are among the academic staff of a professional doctoral study programme in arts (if applicable).

Assessment of compliance: Not relevant

8 8 - The teaching staff members involved in the implementation of the study programme are proficient in the official language in accordance with the regulations on the level of the official language knowledge and the procedures for testing official language proficiency for performing professional duties and office duties.

Assessment of compliance: Fully compliant

Attached resumes of staff (“CV ENGv2.zip”) and confirmation (“Confirmation - knowledge of the state language.edoc”) verifies that state language proficiency is compliant with Cabinet Regulation No. 733 "Noteikumi par valsts valodas zināšanu apjomu, valsts valodas prasmes pārbaudes kārtību un valsts nodevu par valsts valodas prasmes pārbaudi".

9 9 - The teaching staff members to be involved in the implementation of the study programme have at least B2-level knowledge of a related foreign language, if the study programme or any part thereof is to be implemented in a foreign language (if applicable).

Assessment of compliance: Fully compliant

Attached resumes of staff (“ CV ENGv2.zip”) and confirmation (“Confirmation - knowledge of the foreign language.edocs”) verifies that language proficiency in English is at least B2.

10 10 - The sample of the study agreement complies with the mandatory provisions to be included in the study agreement.

Assessment of compliance: Fully compliant

Sample of attached study agreement (“ Sample_of_study_agreement.zip”) complies with Cabinet Regulation No. 70 "Studiju līgumā obligāti ietveramie noteikumi”.

11 11 - The higher education institution / college has provided confirmation that students will be provided with opportunities to continue their education in another study programme or another higher education institution or college (agreement with another accredited higher education institution or college) if the implementation of the study programme is terminated.

Assessment of compliance: Fully compliant

Attached contracts (“Līgumi par studiju parnemšanu ENG.zip”) confirms that the institution provides the possibility to continue studies within the following options: Lithuanian Maritime Academy professional bachelor programme “Marine Engineering”.

12 12 - The higher education institution / college has provided confirmation that students are guaranteed compensation for losses if the study programme is not accredited or the study programme's license is revoked due to the actions (actions or omissions) of the higher education institution or college and the student does not wish to continue studies in another study programme.

Assessment of compliance: Fully compliant

RTU confirmation ("Confirmation - on compensation for losses.edoc") states, that students are guaranteed compensation for losses if the study programme is not accredited or the licence of the study programme is revoked due to the actions of the college (actions or failure to act) and the student does not wish to continue the studies in another study programme.

13 13 - The joint study programmes comply with the requirements prescribed in Section 55.(1), Paragraphs one, two, and seven of the Law on Higher Education Institutions (if applicable)

Assessment of compliance: Not relevant

14 14 - Compliance with the requirements specified in other regulatory enactments that apply to the study programme being assessed (if applicable)

Assessment of compliance: Fully compliant

Annex ("3.2.1._JT-KM_BAK_Atb-Noz-Spec-Regul_LV.docx") confirms, that programme complies with STCW Convention and relevant EU and Latvian regulatory requirements such as Directive (EU) 2022/993 of the European Parliament and of the Council of 8 June 2022 on the minimum level of training for seafarers, Maritime Administration and Marine Safety Law (LV), Regulations Regarding the Medical Fitness of Seafarers for Work on a Ship (LV), Regulations Regarding Certification of Seafarers (LV), Regulations Regarding Certification, Implementation, and Monitoring of Professional Training Programmes for Seafarers (LV).

Assessment of the requirement [8]

1 R8 - Compliance of the study programme with the requirements set forth in the Law on Higher Education Institutions and other regulatory enactments.

Assessment of compliance: Partially compliant

Study programme generally complies with regulatory enactments. Provided diploma sample is only partial and diploma supplement is outdated. Programme does not feature C (free elective) part. Module on entrepreneurial competencies is not well defined.

General conclusions about the study programme, indicating the most important strengths and weaknesses of the study programme

Conclusions:
The professional bachelor programme "Maritime Transport - Marine Engineering" is designed to produce a professionally competent workforce for the maritime sector - qualification obtained at the graduation is "Marine engineer (management level)", meeting both STCW requirements and the specific needs of the industry. Despite a decline in student enrollment since 2018/19, the program's revitalization is expected to improve recruitment and retention. Alumni and employer feedback confirm that the programme effectively prepares graduates for their first professional job at sea. The merger of LMA with RTU has bolstered resources, enabling the provision of all required professional courses and creating potential income generation opportunities. The availability of modern infrastructure, equipment, and simulators ensures that students receive quality training, though some areas, like the practical application of auxiliary machinery, could benefit from slight

improvements. Furthermore, while the teaching staff's qualifications meet the necessary standards, enhancing scientific activities and addressing potential staff overload should be prioritized to maintain the programme's quality.

Strengths:
1. The overall design of the Maritime Transport - Marine Engineering programme is strong and aligns with the maritime industry's needs.
2. The sequencing of compulsory professional courses is a positive indicator of good practice.
3. The merger of LMA with RTU has provided additional resources, enabling the delivery of all required STCW professional courses, including safety training.
4. The use of experienced alumni with up-to-date industry knowledge enhances students' professional development.
5. The infrastructure, equipment, and simulators for the study programme are modern and aligned with its goals.
6. Good communication between the teaching staff and programme director.
7. Lecturers representing industry are involved in the study process.

Weaknesses:
1. A decline in student numbers in maritime engineering programmes requires urgent attention, with a need for an effective student recruitment strategy.
2. The programme lacks a free elective - C - part in the study plan.
3. Modules or courses on entrepreneurial competencies are not well defined.
4. RTU LMA should develop a more robust strategy to support student wellbeing and pastoral care.
5. There is a slight need to improve the technical provisions, especially regarding practical tasks related to auxiliary machinery, such as life equipment and pumps.
6. The relatively small number of state-financed budget places may limit student opportunities.
7. The scientific activities of the teaching staff need improvement, as they are currently observed for only a third of the staff.
8. Staff overload is possible for those balancing work at RTU LMA and additional industry roles.

Evaluation of the study programme "Maritime Transport - Marine Engineering"

Evaluation of the study programme:

Good

2.6. Recommendations for the Study Programme "Maritime Transport - Marine Engineering"

Short-term recommendations

1. Ensure that programme includes free elective (C) part as required by Law on Institutions of Higher Education.
2. Define modules or courses regarding entrepreneurial skills as required by state professional education standards.
3. Provide a full diploma example with an updated supplement.

Long-term recommendations

1. Develop and implement a suitable student recruitment strategy due to an ongoing reduction in student numbers.
2. Establish more, and improved, extramural study provision and support.
3. Necessity to increase the number of state financed budget places.
4. Slight improvement of technical provisions is needed to ensure the study process needs life engineering equipment used onboard the ships (diesel engines and auxiliary machinery).
5. Director of the study programme should develop a more visible strategy to provide greater student pastoral support, and to promote student wellbeing whilst they are engaged in their studies.
6. Director of the study programme should pay attention to the maximum involvement of all staff in various scientific activities (writing publications, participating in projects, etc.) trying to find the potential contribution of each employee.
7. Director of the study programme should control the workload of the teaching staff in order to avoid a decrease in the quality of teaching.
8. Necessary to update relevant equipment for the practical part of the study programme “Maritime Transport - Marine engineer”.

II - "Maritime Transport - Navigation" ASSESSMENT

II - "Maritime Transport - Navigation" ASSESSMENT

2.1. Indicators Describing the Study Programme

Analysis

2.1.1.
Compliance
This first cycle higher education study programme Maritime Transport - Navigation (42525) is designed and intended for school leavers seeking employment in the maritime industry. As described the programme aims and objectives (SAR p.171) are very clear and well-articulated and relate directly to the specified employment vision of the Latvian authorities (SAR p.196) and the needs of the maritime profession. In addition, there is clear evidence throughout the programme documentation, and confirmed during interview, that a good training needs analysis has been conducted in a professional manner and in a maritime Navigation context, thus meeting the requirements of the International Convention on Standards of Training, Certification, and Watchkeeping for Seafarers (STCW), Codes A-II/1 and A-II/2.

2.1.2.
Title
The programme title “Marine Transport - Navigation”, and code 42525, are appropriate and clearly define the professional intent to provide students with the comprehensive theoretical and practical knowledge required for employment at sea as a Navigator. In accordance with regulatory enactments, another code could be relevant in this case: “840 - Transport Services.” It can be argued that the given qualification does not fundamentally emphasize engineering skills. Instead, it focuses on basic operational competencies and a general understanding of technical aspects. Therefore, it may be worthwhile to reconsider the assigned code, as the learning outcomes do not align with those typically required for engineering graduates. This suggests that a code more

relevant to engineering science may not be appropriate. LMA has recently been incorporated as an independent institute within RTU and so this programme is now delivered on the main RTU campus. This suitably flexible, cohesive and well thought out programme, can be studied on a full-time (4 years 3 months) basis (SAR p.194-195) in Latvian or English or on a part-time basis (5 years extra mural), also in Latvian or English. These approaches, particularly delivery in English, are fully justified and hopefully will improve student recruitment and retention. In addition, a significant portion of the study courses have been redeveloped and modified to provide a more comprehensive maritime Navigation theme. A complete statement of the specific learning outcomes are included in the programme documentation. This regard paid to a strong delivery of STCW requirements, with the incorporation of the essential Manila Amendments (see earlier SAR p.169), is a particular strength of this professional Navigation programme.
Admission criteria for both study modes - full-time and part-time - includes a valid medical certificate issued by a maritime doctor confirming fitness for work on a ship as mandated by Latvian regulatory enactments. Applicants must have a secondary education diploma. Additionally, English language proficiency is evaluated in accordance with the applicable regulatory standards. Study programme features budget-funded places while annual tuition fee for full-time programme is EUR 4670 and for part-time - EUR 3740. (https://www.rtu.lv/lv/studijas/visas-studiju-programmas/atvert/UCZ?department=0J000&type=P) Admission requirements are reasonable.
As stated earlier (SAR pp194-195), the programme can be studied full-time or part-time both in Latvian and English. Within the documentation no comprehensive details are provided on how this extramural study approach is implemented and supported. Discussions during the interview indicated an “ad hoc” approach to this depending on numbers, but with College attendance required for practical activities. As a consequence of this limitation the Programme Director should develop a more formalised supportive study strategy for these part-time students. (see for instance https://jime.open.ac.uk/articles/10.5334/jime.470) . The documentation provided shows that the programme has now been designed for implementation in English. This worthy initiative is to be applauded and should support international student recruitment beneficial to the diminishing student numbers on the programme. However, very little detail regarding how the English language programmes will be delivered and assessed is given (SAR p.202). It also indicates a high drop-out rate. It is suggested that the course team need to fully develop a suitable and robust strategy for this delivery mode, and to improve student retention.

2.1.3.
Development, Changes and Merger Opportunities
Following the RTU LMA merger a significant number of developmental changes have been made to the programme aims and objectives, whilst equating the previous credit point allocations with ECTS system. These changes are fully justified, acceptable and comprehensively described in the documentation. They were also confirmed during the interview. These strengthening changes relate directly to the following curriculum areas (SAR p197);
- General Education Courses
- Theoretical Basic Courses of the Industry
- Specialisation Courses in the Industry
With the inclusion of these changes, the programme fully meets the employment vision of the Latvian authorities (SAR p.196) to develop an effective and competitive maritime workforce to meet the latest development needs of the maritime industry within a European context (https://www.dnv.com/maritime/publications/maritime-forecast/). In addition, the evidence that a thorough training needs analysis was conducted in a professional maritime context indicates the clear professional intent of the programme. As stated earlier, these are fully effective with regards to meeting the requirements of STCW. This allows graduating students to obtain the professional

competency certificates of the Latvian Maritime Administration's Seafarers Register. The integration of these professional requirements within the programme are considered to be a particular strength and good evidence of best practice. Finally, the LMA has an established reputation within Latvia as the premier Maritime Training Academy and the delivery of this programme on the merged RTU LMA campus will provide many good additional opportunities for further programme development, and will improve student recruitment and international student income generation.

2.1.4.
Employment indicators for the maritime industry in Europe (SAR p.200), and internationally, remain strong (https://www.mdpi.com/2071-1050/13/14/7961) and (https://www.statista.com/statistics/1313321/direct-employment-eu-shipping-industry-by-subsector/). Thus, this programme will develop a suitably educated, highly qualified and technologically competent workforce to meet this need. Viewed in this context, it is clear and obvious that this programme should thrive, and will continue to recruit good students, although it will have to compete with other maritime Universities and Colleges who provide similar education and professional training opportunities. To compete in this increasingly competitive market, it is suggested that a new, and more robust international student recruitment strategy should be developed and fully implemented as soon as possible. This should also widely promote the English language programmes behind the decline in the interest of young people for working in a maritime profession. (https://www.sciencedirect.com/science/article/abs/pii/S0308597X22002792)
Thesis and Final Assessment
The final assessment for this programme is very good and includes the following elements of assessment:
- State Examination in Maritime English.
- Comprehensive Speciality Examination.
- Public Defence of the Diploma Thesis.
This assessment approach, coupled with significant sea practice, ensures that graduating students have reached the requisite professional standard and have achieved the necessary learning outcomes. This approach to the final assessment of the programme is excellent, and is a strong indicator of best practice being employed to good effect.

2.1.5.
N/A

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:
This important professional navigation programme will develop a fully competent, and professional, workforce for the maritime sector. As stated, the employment indicators for this sector remain strong. In addition, feedback obtained from students and shipping industry employers, during interviews, clearly indicated that this programme is particularly good at providing professionally trained graduates prepared for their first job at sea as “Officer of the Watch - Navigator”.

Strengths:
1. Up to date training. The use of returning experienced seafaring alumni, with suitable up-to-date industry knowledge, to instruct current students is beneficial to the student’s professional development.

Weaknesses:
1. The programme team should develop a suitable strategy to provide more effective, and visible,

extramural learning support.
2. Student Recruitment. To boost numbers this should be managed as a matter of urgency through the development of a more robust recruitment strategy, aimed at both local and international students.
3. The study programme code indicates a focus on engineering science, which does not align with the qualification attainable through the programme.

2.2. The Content of Studies and Implementation Thereof

Analysis

2.2.1.
Course Content
The design of this professional Navigation programme is very effective and is consistent with the current employment needs of the maritime industry sector (https://www.mdpi.com/2071-1050/13/14/7961). The compulsory and elective study courses are logically sequenced and facilitate effective programme delivery. All important areas of study, as listed in the programme course documentation, fully cover the professional requirements for STCW certification, and meet European Union directives and Latvian Cabinet of Ministers regulation no. 710 (SAR p.203). Extensive use of appropriate IMO model courses are used to deliver the programme (SAR pp.204-205). Strengthening changes, based on evaluation surveys conducted with students, recent graduates, during internships, and with employers, have provided a comprehensive assessment of the quality of the study process relating to both numerical and technical areas of the programme.

Practical Learning Strategies
As described, and in accordance with STCW requirements, this professional study programme uses a number of industry standard simulators (SAR p.207), and other equipment, for both normal training and other more complex safety training delivery. These activities involve using GMDSS, ARPA/RADAR, ship bridge simulators and ship navigation and other technical equipment housed in dedicated laboratories. The proposed use of simulators is a strong indicator of best practice using modern hands-on teaching techniques effectively.

The "Maritime Transport - Navigation" programme, aligned with Level 6 of the European Qualifications Framework, provides in-depth theoretical knowledge and practical skills in maritime transport and navigation. Practical training includes simulator use and mandatory sea practice, required for earning a bachelor's degree and professional qualification. The programme's design and objectives are industry-aligned and coordinated with the Seafarer Register of the Latvian Maritime Administration. Study programme complies with professional standard “Navigator (at management level)”.

The annex (“P06_3.2.1._UCZ0(42525)_AtbilstibaValstsStandartam_ENGv3.docx”) confirms that the study programme generally complies with the requirements of Cabinet Regulation No. 305, titled “Noteikumi par valsts profesionālās augstākās izglītības standartu” (“Regulations on the National Professional Higher Education Standard”). Notably, the study programme includes the Environment and Civil Protection courses. However, there are concerns regarding the inclusion of modules on entrepreneurial competencies as mandated by Article 22.1 of the Standard. The regulation requires that programmes in mandatory part must include competencies, such as the organization and establishment of companies, management methods, the basics of project development and management, document and financial accounting systems, and knowledge of fostering social dialogue within society. It is unclear how the study programme addresses or integrates these

competencies. The programme documentation does not provide sufficient detail to demonstrate how these outcomes are achieved within the existing curriculum structure by providing following mandatory courses: Maritime Economics – 1 CP/ 1.5 ECTS. Maritime Economics - course project – 1 CP/ 1.5 ECTS, Quality Management in Maritime Transport – 1 CP/ 1.5 ECTS, Engine Resource Management – 2 CP/ 3 ECTS, Labour Safety and Legislation on Ships – 2 CP/ 3 ECTS, Maritime Law – 2 CP/ 3 ECTS. Furthermore, the study programme plan does not include a free elective - C - part, therefore some further clarifications are needed.

2.2.2.
N/A

2.2.3.
Implementation and Delivery
A clear, coherent, and logical structure is presented. The statements made in the programme descriptors effectively specify the indicative course content as mentioned previously in section 2.1.3. This approach should facilitate the development of the student understanding required to meet learning outcomes, and the acquisition of appropriate practical skills and competences attained during study of the programme. In addition, modern online delivery approaches are also embraced and used to good effect. This suitably flexible programme can be studied on a full-time basis (4 years 3 months, SAR p.194-195) or on a part-time basis (5 years extra mural), in Latvian or English. These approaches are commendable, and should ensure a good level of Latvian, and International, student recruitment.
Part-time Studies
It is stated in the SAR (p.194-195) that the programme can be studied part-time over 5 years either in Latvian or English. Despite this assertion no real details are provided on how this extramural study approach is implemented, managed and supported. Given the proportion of students that have stopped following this study route, this is a concern. It would appear from the interviews with staff that theoretical study is carried out on an “ad-hoc” distance basis, with attendance required for practical activities. It is thus recommended that the Programme Director should develop a more formalised, and supportive, study strategy for these part-time students. (see https://jime.open.ac.uk/articles/10.5334/jime.470)

English Programme Support
The documentation provided also states (SAR pp.194-195) that the programme is also designed to be delivered in English. This is to be applauded and should support increased international student recruitment, beneficial to the declining student numbers seen on the programme. However, the SAR provides very little detail regarding how the English programmes will be delivered in an operational sense, or how it will be assessed. It is suggested that the course team fully develop a suitable and robust strategy for this delivery mode. This should also demonstrate more visibly the equivalence of the full-time and part-time modes of study.

2.2.4.
If the study programme is implemented in a foreign language, provide an assessment of the provision of internship in a foreign language, including for foreign students.
Internships and Sea Practice
The inclusion of a fully supported, and mandated, internship/sea practice period is a particular strength of this programme. This important cornerstone of the programme is essential to meet STCW certification requirements and Latvian seafaring requirements (Cabinet Regulation No. 793). The practical professional training opportunities that this provides must not be understated. This important aspect of the programme, as described in the documentation (SAR pp. 211-212), is very

well managed with the final results of the internship fully logged and discussed in the "Ship Captain Trainee's Internship Book" upon completion of the period at sea. This internship report (log) fully details the professional skills and competences acquired during time at sea. This student-centred and professional approach is to be commended. The maintenance and, where possible, the continual improvement, of this approach must remain of paramount importance to the course delivery team going forward.

2.2.5.
N/A

2.2.6.
Final Assessment and Thesis (Graduate Attributes)
The final assessment of the course includes a comprehensive Speciality Examination, a State Maritime English Examination and a public Thesis Defence. The requirement for a suitably relevant final thesis defence (SAR pp.212-214) is recognised here as a strength of the programme, and essential and entirely appropriate for this level of study. In addition, the requirement the public defence of an individual thesis should ensure that a graduating student from this programme has attained the necessary skills and competences required for employment in the maritime sector, and is ready, and willing, to demonstrate them in the public arena.

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:
This "Maritime Transport - Navigation" programme is very strong, well-developed and is considered to be fully effective in its stated aims of providing good, competent Navigation Officers for the maritime sector. The compulsory courses studied are all delivered to the STCW international standard, and are appropriate for the professional nature of the programme. The final assessment of the programme, which includes a managed internship period at sea, is very good and includes the preparation and defence of a Diploma Thesis, a Maritime English Examination and a comprehensive Qualification Examination in accordance with STCW codes, including the Manila amendments. The merger of LMA with RTU has also provided the combined institutions with the opportunity to develop additional professional training, and this coupled with LMA’s established reputation as a premier Maritime Training Academy, bodes well for the future of the programme.

Strengths:
1. The number of different course delivery formats currently provides good programme flexibility.
2. Feedback obtained from alumni and employers confirmed that the delivery of this programme provided excellent professional preparation for a first sea job.

Weaknesses:
1. Feedback from former students suggests that the programme curriculum would benefit from the inclusion of important “soft” management skills such as communication, leadership, conflict resolution and adaptability.
2. Part-time study. A more detailed formalised part-time study framework is required.
3. Study programme plan does not feature a free elective - C - part.
4. Modules and/or courses on entrepreneurial competencies are not well defined.

Assessment of the requirement [5] (applicable only to master's or doctoral study programmes)

1 R5 - The study programme for obtaining a master's or doctoral degree is based on the achievements and findings of the respective field of science or field of artistic creation.

Assessment of compliance: Not relevant

2.3. Resources and Provision of the Study Programme

Analysis

2.3.1.

For both study programmes “Maritime Transport - Navigation” (42525) and “Navigation” (41525) mostly the same study infrastructure, informative and material and technical provisions are used.

According to SAR p.217, there are available such common equipment for the implementation of the study programme Navigation (41525) as projectors and screens, interactive whiteboards, copiers, printers, scanners, portable computers and other multimedia equipment.

During the tour of facilities the experts had an opportunity to see the different simulators used in the implementation of the study programme. For instance, full mission Bridge Simulators provides students with the competence “To carry out navigational watch”. There are many other examples of successful use of simulators and the relevant equipment in the study process – GMDSS, ECDIS, RADAR/ARPA and Liquid Cargo Handling simulator. For instance:

- GMDSS simulators, specifically the Transas TGS-5000 (with 10 workstations), are utilised in the course "Communication Organization and GMDSS."
- The "NAPA Loading Computer" is employed to solve various practical tasks in study courses such as "Ship Cargo Transportation Technology," "Ship Theory," and "Ship Construction and Operation."
- The study course "Ship Navigation Equipment" is equipped with a training room containing traditional ship navigation instruments and the PK-2306 Satellite Compass.
- The study courses "Navigation," "Maritime Astronomy," and "Navigation Meteorology" are facilitated by training rooms furnished with chart tables, instruments, paper charts, and collections of navigation publications.

Compulsory STCW short training courses are conducted both in the premises of the Training Center in the RTU campus and on the pontoon "Kadets," which is equipped with specialized technical equipment corresponding to the specific course programme approved by the Registry of Seamen (e.g., lifeboats, life rafts, firefighting equipment, towing and mooring devices, first aid kits etc.).

During the on-site visit experts gathered confirmation that the students and teaching staff have an access to subscribed databases for studying and research purposes, including:

- EBSCO: Access to full-text and review databases in the humanities, social sciences, and exact sciences. Collection: National package Academic Search Complete.
- EBSCO: INSPEC: Access to full-text database in the exact sciences.
- KR - CON:2: Access to a subscription code for a specialised maritime regulatory document database.
- International Maritime Organization (IMO): Database of current IMO documents.

It's important to mention that RTU Library provides access to previous years' students' theses/projects, methodological materials prepared by RTU LMA teaching staff and the latest navigation publications and textbooks relevant to the study programme.

All necessary study materials, including course descriptions, are uploaded to the study e-platform OMARS. The platform is regularly updated to ensure convenient access to study materials for both teaching staff and students.

According to SAR p.219, the review of the study program's methodological and informational support, as well as the determination of procurement and improvement measures, takes place at least once during the academic year, through the preparation of annual reports and quality objectives by the relevant structural units of RTU LMA for the upcoming accreditation review period.

2.3.2.
N/A

2.3.3.
According to SAR p.220, funding for the study programme "Maritime Transport - Navigation" includes:
- Grant or basic budget funding (state budget-funded student training).
- Fee-based student funding (both full-time on-site and part-time distance learning fee-based student training, as well as fees for re-examinations).
- Performance-based funding (support for scientific activities).
- Funding for the research base.
The funding allocated from the state budget for the implementation of the study programme per student is as follows: EUR 2771.19 in 2022 and EUR 3596.47 in 2023. RTU LMA has agreed with the Ministry of Education and Science to increase the budget funding per student by reducing the number of budget places. Compared with 2015, the number of budget places decreased from 154 to 113 in 2023. (SAR p.220) From experts' opinion the reduction of the state budget places left a negative impact on the number of enrolled students in recent years.
In addition to the state budget-funded study places, the study programme is also financed by the income from fee-paying students, whether they are individuals or legal entities. There is a tendency for an increase in the number of fee-paying students. The funding from fee-paying students is used for the renewal of material and technical support, attracting higher-level specialists to ensure the study process, and other purposes. The tuition fee for the study programme "Maritime Transport - Navigation" is EUR 3520 per year per student. (SAR p.220.)
Taking into account the above mentioned, experts are of the opinion that the financial resources available for the implementation of the study programme are mostly sufficient. However there is also need for extra funding to develop the specific material technical provisions of the study programme, such as training infrastructure for STCW compulsory short training courses.

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:
The funding available for the implementation of the study programme is sufficient to ensure the part time and full time study process. Study infrastructure, equipment, and simulators available for the study programme “Maritime Transport - Navigation (42525)” are modern and correspond to the goals and planned results of the programme. Informative provisions (incl. the latest editions of the navigational publications and text books) in most cases were found relevant and available for implementation of the study programme.

Strengths:
1. Professional and highly competent instructors of simulators used in the study process;

Weaknesses:
1. Despite the fact that the number of state budget places is higher than for marine engineering and electro automation study programmes, it's still not sufficient to enhance the number of enrolled students.

Assessment of the requirement [6]

1 R6 - Compliance of the study provision, science provision (if applicable), informative provision (including library), material and technical provision and financial provision with the conditions for the implementation of the study programme and ensuring the achievement of learning outcomes

Assessment of compliance: Fully compliant

Justification:
The funding available for the implementation of the study programme is sufficient to ensure achievement of the learning outcomes, namely, financial provision comply with specific features and the conditions for the implementation of the study programme. Study infrastructure, equipment and simulators available for the study programme “Maritime Transport - Navigation” are modern and correspond to the goals and planned results of the programme.

2.4. Teaching Staff

Analysis

2.4.1.
The qualification of the teaching staff involved in the implementation of the study programme "Maritime Transport - Navigation" complies with the conditions for the implementation of the study programme and the requirements of regulatory enactments. The qualification requirements for lecturers at maritime education institutions and training centres are determined by the Cabinet of Ministers Regulation No. 710 of December 15, 2015, "Regulations on Certification, Implementation, and Monitoring of Professional Preparation Programs for Seafarers." The education obtained for all teachers is practically directly related to the specific field of science, as also they possess the necessary research skills and expertise to provide students with the required learning outcomes within the scope of the conducted courses in accordance with STCW and higher education requirements (SAR, Study Programme "Maritime Transport - Navigation" (42525), 3.4. Teaching Staff, 3.4.1.).
All staff members teaching specialised courses within the study programme have obtained the appropriate instructor-evaluator certificates, according to the requirements of STCW Convention Regulation I/6, and regularly update their competencies and knowledge.
Number of teachers (38) and other personnel ensure delivery of intended learning outcomes in the programme. As said in SAR and confirmed during visit the teaching staff with regards to their qualification complies with the requirements specified in Law on Higher Education Institutions. The teaching personnel (instructors, supervisors and assessors) of the general and professional subjects are education and/or maritime professionals with the relevant seafarer’s qualification, and with the relevant seagoing service.Totally, 38 lecturers, including 5 professors, 3 associate professors and 17 docents, from the RTU LMA staff are involved in implementation of the first-cycle professional higher education study programme "Maritime transport - Navigation." The compliance of visiting professors, associate visiting professors, visiting docents, visiting lecturers, and visiting assistants is evaluated based on the Regulations No. 4 "On the Management of Academic Staff at the Latvian Maritime Academy" of the Latvian Maritime Academy. Lecturers with extensive professional work experience in the field are also involved in the implementation of the study programme. Taking into account the current number of students they have unrestricted access to the teachers.
Administration of RTU LMA continuously monitors the quality assurance of the academic staff involved in the implementation of the study programme. The personnel of LMA actively participate in training courses organised by the LMA Training Center, as also professional English language and instructor-evaluator courses. In overall, qualification enhancement is promoted both locally and internationally by LMA management. Teachers are competent.

2.4.2.
Teaching staff seems to be stable for a longer period of time with small decrease taking into account their competences but considering also quite a high average age. Teachers are enthusiastic, they provide good support for the operation of the Academy. However, RTU LMA feels the need to attract staff in the future in the study programme "Maritime Transport - Navigation", which can be influenced by the uncompetitive remuneration in the higher education sector compared to the remuneration received by industry experts in the private sector (SAR, Study Programme "Maritime Transport - Navigation" (42525), 3.4. Teaching Staff, 3.4.2.). RTU LMA manages to attract highly motivated practising seafarers with appropriate qualifications to teach certain study courses in their free time from their main job not affecting the quality of the studies. As some staff work in multiple jobs it could lead to overload. At the same time this creates complications in the process of planning study courses, which in some cases even results in an extension of the academic year. Consequently, regular changes in the planning of study courses tend to cause dissatisfaction among students. Despite the uncompetitive salary level compared to the salary in the industry, the management of RTU LMA manages to attract new teaching staff to independent work at RTU LMA without reducing the quality of the study programme.
In general, teaching staff of various levels and professional qualifications are involved in the implementation of the study programme, which includes both practising mariners and professionals from maritime industry companies.

2.4.3.
N/A

2.4.4.
13 of all staff members have 78 publications in the last 6 years, mainly for professors, assoc. professors and docents. The rest of the teaching staff has more than 5 years of practical work experience in the industry, for example, in the position of officers and inspectors, etc. The analysis is based on the staff CV (II - Description of the Study Field - 2.3. Resources and Provision of the Study Field; Annex CV ENGv2.zip) and list of publications (II - Description of the Study Field - 2.4. Scientific Research and Artistic Creation; Annex Publications-Patents-Conferences ENG v2.zip).

2.4.5.
Interviews confirmed that faculty collaborate with each other through various mechanisms (informal meetings of teaching staff, departmental meetings, discussions on study outcomes and quality assurance principles, and other events) established by the RTU LMA. At least once a month, structural unit meetings are organised to promote not only mutual communication between employees, but also to discuss current issues related to the study and scientific process. The improvement of study courses is based on the suggestions of both students and teaching staff and members of the state examination commission. The director of the study programme tries to actively cooperate with the teaching staff, willingly listens to suggestions and makes improvements to the study programme.
In addition to that, the RTU LMA also has informal faculty meetings, which allow discussing current issues in an informal atmosphere, and then, in the event of a formal decision, inform the heads of the structural units about it and include the issue in the structural unit's meeting.

Conclusions on this set of criteria, by indicating strengths and weaknesses

Conclusions:
The qualification of the teaching staff involved in the implementation of the study programme complies with the conditions for the implementation of the study programme and requirements of

regulatory enactments. The qualification of the teaching staff is on a good level, but the scientific activities should be improved, as they can only be observed for 1/3 of the teaching staff. The total number of teaching staff participating in the study programme has been decreasing since 2019, but LMA takes the necessary steps to ensure that the changes in the number of teaching staff does not affect the quality of studies. Cooperation between the teaching staff and the director of the study programme is at a good level, which ensures the appropriate flow of information between the director of the study programme and the teaching staff.

Strengths:
1. Communication is at a good level between the staff and the study programme director.
2. Lecturers from maritime industry companies are involved in the study process.

Weaknesses:
1. Staff overload is possible for teaching staff trying to combine work at RTU LMA and one or more companies.

Assessment of the requirement [7]

1 R7 - Compliance of the qualification of the academic staff and visiting professors, visiting associate professors, visiting docents, visiting lecturers and visiting assistants with the conditions for the implementation of the study programme and the requirements set out in the respective regulatory enactments.

Assessment of compliance: Fully compliant

Justification: The qualification of the teaching staff involved in the implementation of the study programme complies with the conditions for the implementation of the study programme and the requirements of regulatory enactments.

2.5. Assessment of the Compliance

Requirements

1 1 - The study programme complies with the State Academic Education Standard or the Professional Higher Education Standard

Assessment of compliance: Partially compliant

Annex (“ P06_3.2.1._UCZ0(42525)_AtbilstibaValstsStandartam_LVv2.docx) confirms that the study programme complies with Cabinet Regulation No. 305 “Noteikumi par valsts profesionālās augstākās izglītības standartu”. Environment and Civil protection course (LJA558 Civil Protection) is included in the programme. However, module on entrepreneurial competencies, as mandated by standard (Article 22.1), is not well defined - it is not clear how required competencies (organization and establishment of companies, management methods, basics of project development and management, document and financial accounting systems, knowledge about fostering social dialogue in society) is met by programme. Study programme plan does not feature C (free elective) part

2 2 - The study programme complies with a valid professional standard or the requirements for the professional qualification (if there is no professional standard required for the relevant occupation) provided if the completion of the study programme leads to a professional qualification (if applicable)

Assessment of compliance: Fully compliant

Annex (“ P07_3.2.1._KEA_AtbProfStand_ENGv2.docx”) confirms that the programme complies

with the professional standard "Navigator (at management level)" approved on October 16, 2013

3 3 - The descriptions of the study courses and the study materials have been prepared in all languages in which the study programme is implemented, and they comply with the requirements set forth in Section 561 , Paragraph two and Section 562 , Paragraph two of the Law on Higher Education Institutions.

Assessment of compliance: Fully compliant

Attached study course descriptions (“SKA-JT-KV-BAK-LV.zip”) are prepared in Latvian and English. Descriptions comply with regulations set forth in Law on Higher Education Institutions.

4 4 - The sample of the diploma to be issued for the acquisition of the study programme complies with the procedure according to which state recognised documents of higher education are issued.

Assessment of compliance: Partially compliant

The provided Diploma sample (“ KV-bak-diploms&pielikumsv2LV.zip) partially complies with the procedure by which state-recognised documents of higher education are issued in accordance with Cabinet Regulation No. 202 “Kārtība, kādā izsniedz valsts atzītus augstāko izglītību apliecinošus dokumentus” as provided sample contains only 3rd page of diploma and supplement. Diploma supplement is outdated.

5 5 - The academic staff of the academic study programme complies with the requirements set forth in Section 55, Paragraph one, Clause 3 of the Law on Higher Education Institutions.

Assessment of compliance: Not relevant

6 6 - Academic study programmes provided for less than 250 full-time students may be implemented and less than five professors and associated professors of the higher education institution may be involved in the implementation of the mandatory and limited elective part of these study programmes provided that the relevant opinion of the Council for Higher Education has been received in accordance with Section 55, Paragraph two of the Law on Higher Education Institutions.

Assessment of compliance: Not relevant

7 7 - At least five teaching staff members with a doctoral degree are among the academic staff of an academic doctoral study programme, at least three of which are experts approved by the Latvian Science Council in the respective field of science. At least five teaching staff members with a doctoral degree are among the academic staff of a professional doctoral study programme in arts (if applicable).

Assessment of compliance: Not relevant

8 8 - The teaching staff members involved in the implementation of the study programme are proficient in the official language in accordance with the regulations on the level of the official language knowledge and the procedures for testing official language proficiency for performing professional duties and office duties.

Assessment of compliance: Fully compliant

Attached resumes of staff (“CV ENGv2.zip”) and confirmation (“Confirmation - knowledge of the state language.edoc”) verifies that state language proficiency is compliant with Cabinet Regulation No. 733 "Noteikumi par valsts valodas zināšanu apjomu, valsts valodas prasmes pārbaudes kārtību un valsts nodevu par valsts valodas prasmes pārbaudi".

9 9 - The teaching staff members to be involved in the implementation of the study programme have at least B2-level knowledge of a related foreign language, if the study programme or any part thereof is to be implemented in a foreign language (if applicable).

Assessment of compliance: Fully compliant

Attached resumes of staff (“ CV ENGv2.zip”) and confirmation (“Confirmation - knowledge of the foreign language.edocc”) verifies that language proficiency in English is at least B2.

10 10 - The sample of the study agreement complies with the mandatory provisions to be included in the study agreement.

Assessment of compliance: Fully compliant

Sample of attached study agreement (“ Sample_of_study_agreement.zip”) complies with Cabinet Regulation No. 70 "Studiju līgumā obligāti ietveramie noteikumi”.

11 11 - The higher education institution / college has provided confirmation that students will be provided with opportunities to continue their education in another study programme or another higher education institution or college (agreement with another accredited higher education institution or college) if the implementation of the study programme is terminated.

Assessment of compliance: Fully compliant

Attached contracts (“Līgumi par studiju parnemšanu ENG.zip”) confirms that the institution provides the possibility to continue studies within the following option: Lithuanian Maritime Academy professional bachelor programme “Marine Navigation”

12 12 - The higher education institution / college has provided confirmation that students are guaranteed compensation for losses if the study programme is not accredited or the study programme’s license is revoked due to the actions (actions or omissions) of the higher education institution or college and the student does not wish to continue studies in another study programme.

Assessment of compliance: Fully compliant

RTU confirmation (“Confirmation - on compensation for losses.edoc”) states, that students are guaranteed compensation for losses if the study programme is not accredited or the licence of the study programme is revoked due to the actions of the college (actions or failure to act) and the student does not wish to continue the studies in another study programme.

13 13 - The joint study programmes comply with the requirements prescribed in Section 55.(1), Paragraphs one, two, and seven of the Law on Higher Education Institutions (if applicable)

Assessment of compliance: Not relevant

14 14 - Compliance with the requirements specified in other regulatory enactments that apply to the study programme being assessed (if applicable)

Assessment of compliance: Fully compliant

Annex (“Atbilstība atbilstošās nozares specifiskajam normatīvajam regulējumam KVv2.docx”) confirms, that programme complies with STCW Convention and relevant EU and Latvian regulatory requirements such as Directive (EU) 2022/993 of the European Parliament and of the Council of 8 June 2022 on the minimum level of training for seafarers, Maritime Administration and Marine Safety Law (LV), Regulations Regarding the Medical Fitness of Seafarers for Work on a Ship (LV), Regulations Regarding Certification of Seafarers (LV), Regulations Regarding Certification, Implementation, and Monitoring of Professional Training Programmes for Seafarers (LV).

Assessment of the requirement [8]

1 R8 - Compliance of the study programme with the requirements set forth in the Law on Higher Education Institutions and other regulatory enactments.

Assessment of compliance: Partially compliant

Study programme generally complies with regulatory enactments. Provided diploma sample is only partial. Diploma supplement is outdated. Programme does not feature free elective parts. The Module on entrepreneurial competencies is not well defined.

General conclusions about the study programme, indicating the most important strengths and weaknesses of the study programme

Conclusions:
The professional bachelor programme “Maritime Transport - Marine Engineering” is designed to produce a professionally competent workforce for the maritime sector - qualification obtained at the graduation is “Marine engineer (management level)”, meeting both STCW requirements and the specific needs of the industry. Despite a decline in student enrollment since 2018/19, the program's revitalization is expected to improve recruitment and retention. Alumni and employer feedback confirm that the programme effectively prepares graduates for their first professional job at sea. The merger of LMA with RTU has bolstered resources, enabling the provision of all required professional courses and creating potential income generation opportunities. The availability of modern infrastructure, equipment, and simulators ensures that students receive quality training, though some areas, like the practical application of auxiliary machinery, could benefit from slight improvements. Furthermore, while the teaching staff's qualifications meet the necessary standards, enhancing scientific activities and addressing potential staff overload should be prioritized to maintain the programme's quality.

Strengths:
1. The overall design of the Maritime Transport - Marine Engineering programme is strong and aligns with the maritime industry's needs.
2. The sequencing of compulsory professional courses is a positive indicator of good practice.
3. The merger of LMA with RTU has provided additional resources, enabling the delivery of all required STCW professional courses, including safety training.
4. The use of experienced alumni with up-to-date industry knowledge enhances students' professional development.
5. The infrastructure, equipment, and simulators for the study programme are modern and aligned with its goals.
6. Good communication between the teaching staff and programme director.
7. Lecturers representing industry are involved in the study process.

Weaknesses:
1. A decline in student numbers in maritime engineering programmes requires urgent attention, with a need for an effective student recruitment strategy.
2. The programme lacks a free elective - C - part in the study plan.
3. Modules or courses on entrepreneurial competencies are not well defined.
4. RTU LMA should develop a more robust strategy to support student wellbeing and pastoral care.
5. There is a slight need to improve the technical provisions, especially regarding practical tasks related to auxiliary machinery, such as life equipment and pumps.
6. The relatively small number of state-financed budget places may limit student opportunities.
7. The scientific activities of the teaching staff need improvement, as they are currently observed for

only a third of the staff.
8. Staff overload is possible for those balancing work at RTU LMA and additional industry roles.

Evaluation of the study programme "Maritime Transport - Navigation"

Evaluation of the study programme:

Good

2.6. Recommendations for the Study Programme "Maritime Transport - Navigation"

Short-term recommendations

1. Ensure that programme includes free elective (C) part as required by Law on Institutions of Higher Education.
2. Define modules or courses regarding entrepreneurial skills as required by state professional education standards.
3. Provide a full diploma example with an updated supplement

Long-term recommendations

1. Develop and implement a suitable student recruitment strategy due to an ongoing reduction in student numbers.
2. Develop a more detailed formalised part-time study framework.
3. Necessity to increase the number of state financed budget places.
4. Director of the study programme should control the workload of the teaching staff, the number of study courses to be taught, in order to avoid a decrease in the quality of teaching.
5. Director of the study programme should pay attention to the maximum involvement of all staff in various scientific activities (writing publications, participating in projects, etc.) trying to find the potential contribution of each employee.
6. Director of the study programme should develop a suitable strategy to provide more effective, and visible, extramural learning support.

II - "Navigation" ASSESSMENT

II - "Navigation" ASSESSMENT

2.1. Indicators Describing the Study Programme

Analysis

2.1.1.
Compliance
This second level higher education study programme is designed and intended for Navigation students who are already employed in their profession. The studies in this programme comply with the aim to enhance their professional skills, knowledge, and competencies in line with the professional qualifications required of a ship Navigation Officer at the management level. As described the programme intended aims and objectives (SAR p.234) are very clear and relate

directly to European Union directives and Latvia Cabinet Regulation No. 710. Admission requirements and the content of the study programme are well interrelated, aligned with industry requirements, and are coordinated with the Seafarer Register of the Latvian Maritime Administration (SAR p.233) to meet STCW standard code A-II/2, Master on ships of 3000 GT, or more. Substantial evidence presented throughout the programme documentation, and confirmed during interview, indicates that a full training needs analysis, leading to positive programme development, has been conducted in a professional maritime Navigation context. The post-graduation employment opportunities for graduates from this programme are good.

2.1.2.
The duration and scope of the study programme implementation (including different study programme implementation options), as well as the implementation language, are reasonable and justified.
In accordance with regulatory enactments, another code could be relevant in this case: “840 - Transport Services.” It can be argued that the current qualification does not fundamentally emphasize engineering skills. Instead, it focuses on basic operational competencies and a general understanding of technical aspects. Therefore, it may be worthwhile to reconsider the assigned code, as the learning outcomes do not align with those typically required for engineering graduates. This suggests that a code more relevant to engineering science may not be appropriate

Title
The programme title is appropriate and defines its professional intent to provide management level graduates with the comprehensive theoretical and practical knowledge required for employment at sea as a senior Navigator. LMA has recently been incorporated as an independent institute within RTU and so this programme is now delivered on the main RTU campus. This reasonably flexible programme can be studied on a full-time (2.1 years) or a part-time extramural basis (3 years extra mural) (SAR p.230, p.234). The programme is taught only in Latvian. During the review period, this study programme is only implemented in its part-time extramural mode featuring annual tuition fee of EUR 3034. .
The admission criteria for the programme include the submission of a valid medical certificate issued by a maritime doctor, confirming fitness for work on a ship in accordance with Latvian regulatory requirements. Additionally, applicants must have successfully completed the short-cycle programme "Navigation." This programme is designed to serve as a continuation of studies for graduates of the "Navigation" short-cycle programme. As previously noted, during the review period, only the part-time extramural mode is being implemented, as indicated on the RTU LMA website as well. However, a full-time variant has also been submitted for evaluation, allowing for the possibility of introducing a full-time option in the future, should there be sufficient demand

2.1.3.
Development, Changes and Merger Opportunities
Following the RTU LMA merger a significant number of developmental changes are now proposed (SAR pp.231-232) to the programme aims and objectives, with some of the credit point allocations for courses being changed. These are fully justified and acceptable and were comprehensively described in the documentation, and confirmed during an interview with the Programme Director. These strengthening changes relate directly to the compulsory specialisation courses in the curriculum (SAR p. 232). The compulsory general education courses remain unchanged. The inclusion of these changes will provide students with enhanced, and more comprehensive, theoretical and practical knowledge in the field of study. This will go some way towards delivering a more effective and competitive maritime workforce which meets the latest development needs of the maritime industry, in Latvia and the European context

(https://www.dnv.com/maritime/publications/maritime-forecast/). As stated earlier, these are fully effective with regards to meeting the requirements of STCW, particularly the Manila Amendments to the STCW Convention (2016). The integration of these enhanced professional courses within the programme are considered to be a particular strength and good evidence of best practice. Finally, the LMA has an established reputation within Latvia as the premier Maritime Training Academy and the delivery of this programme on the merged RTU LMA campus will provide many good additional opportunities for further programme development, and should improve student recruitment and retention.

2.1.4.
Employability and Student Recruitment
Although it was acknowledged in the SAR, and during the interviews, that student recruitment and retention has been poor in recent years, employment indicators for the maritime industry in Europe and Internationally, remain strong, particularly where shortages exist, (https://www.mdpi.com/2071-1050/13/14/7961). This programme will develop a suitably educated, fully qualified and technologically competent workforce to meet this growing need. Viewed in this context, it is clear and obvious that this programme should thrive, and should be able to recruit good students from within Latvia. To compete in this increasingly competitive market, it is suggested that a new, and more robust student recruitment strategy should be developed and fully implemented as soon as possible. (https://www.sciencedirect.com/science/article/abs/pii/S0308597X22002792)

2.1.5.
Learning Provision
As stated earlier (SAR p.230, p.234), the programme can be studied full-time or part-time in Latvian. Within the documentation no comprehensive details are provided on how the part-time extramural study approach is implemented, managed and supported. Discussions during the interview indicated that an “ad hoc” approach, depending on student numbers was used. This also required College attendance where practical activities were required. This is a significant limitation. Therefore, the Programme Director must develop a more formalised study strategy to support these part-time students. (see https://jime.open.ac.uk/articles/10.5334/jime.470). This would certainly go some way towards improving student retention on the programme.

Thesis and Final Assessment
The final, and overall, assessment strategy for this programme is very good, and is a strong indicator of best practice being employed to good effect. The following elements of assessment are included in the final examination upon the completion of the study programme:
1. State Examination in Maritime English.
2. Comprehensive Speciality Examination.
3. Defence of a Reviewed Thesis.
This assessment approach, coupled with significant sea practice (see later section 2.2.4), ensures that graduating students from this programme have reached the requisite STCW standard, and have achieved all necessary professional and educational, learning outcomes. This approach to the final assessment of the programme is excellent.

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:
This important navigation programme develops fully competent, and professional Navigators for the maritime sector. As stated, the employment indicators for this sector remain strong. Feedback

obtained from students, and shipping industry employers, clearly indicated that this programme is particularly good at providing professionally trained Navigators which fully meet the STCW requirements for “Officer of the Watch”.

Strengths:
1. Up to date training facilities and simulators. A strong indicator of best practice.

Weaknesses:
1. The programme team should develop a more formalised strategy to provide effective extramural learning support.
2. Student Recruitment. The decreasing student numbers seen in maritime programmes is a cause for concern. This should be managed as a matter of urgency through the development of a more robust recruitment strategy directly aimed at potential Latvian students.

2.2. The Content of Studies and Implementation Thereof

Analysis

2.2.1.
Course Content
The design of this professional Navigation programme is very effective and is consistent with the current employment needs of the maritime industry sector (https://www.mdpi.com/2071-1050/13/14/7961). The compulsory and elective study courses are logically sequenced and facilitate successful programme delivery. All important areas of study, as listed in the programme course documentation, fully cover the professional requirements for STCW certification, and meet European Union directives and the Latvian Cabinet of Ministers regulation no. 710 (SAR p.236). Appropriate IMO model courses are used to deliver the programme (SAR p.237). Strengthening changes, based on evaluation surveys (SAR p.237) conducted with students, recent graduates, during internships, and with employers, have provided a comprehensive review of the quality of the programme, and delivery of the professional learning outcomes. The programme is also internally audited annually (SAR p.238). All of these indicate best practice being implemented. However, feedback obtained during the interview with former students suggested that the inclusion of more “soft” management topics such as communication, leadership, conflict resolution and adaptability would be beneficial.

Practical Learning Strategies
As described, and in accordance with STCW requirements, this professional study programme uses a number of industry standard simulators (SAR pp.238-239), and other equipment, for both normal training and also for more complex safety training delivery. These activities involve using GMDSS, ARPA/RADAR, ship bridge simulators and ship navigation and other technical equipment housed in dedicated laboratories. The proposed use of simulators is a strong indicator of best practice using modern hands-on teaching techniques effectively, and to the benefit of student learning and professional development.
The "Navigation" (44525) programme, aligned with Level 6 of the European Qualifications Framework, provides in-depth theoretical knowledge and practical skills in maritime transport and navigation. Practical training includes simulator use and mandatory sea practice, required for earning a bachelor's degree and professional qualification. The programme's design and objectives are industry-aligned and coordinated with the Seafarer Register of the Latvian Maritime Administration. Study programme complies with the professional standard “Navigator (at management level)”. However, the study programme plan does not include a free elective - C - part, therefore some further clarifications are needed.

2.2.2.
N/A

2.2.3.
Implementation and Delivery
A clear, coherent, and logical delivery structure is presented. The statements made in the programme descriptors effectively specify the indicative course content as mentioned previously. This approach should facilitate the development of student understanding required to meet learning outcomes, and for the acquisition of appropriate practical skills and competences attained during the programme. In addition, modern and online delivery approaches are embraced and used to good effect (SAR p.240). This suitably flexible programme can be studied on a full-time basis (2 years) or on a part-time basis (3 years extra mural). The language of instruction is Latvian. These approaches are commendable, and must be more vigorously promoted to increase the level of Latvian student recruitment. Current recruitment to this programme, as stated earlier, is very poor.

Part-time Provision
It is stated (SAR p.230, p.234) that the programme can be studied part-time over 3 years. Despite this assertion no real descriptive details are provided on how this extramural study approach is implemented, managed and supported. Given the proportion of students that have dropped out from this study route, this is a concern. It would appear from the interviews with staff that theoretical study is carried out on an “ad-hoc” distance basis, with attendance required for practical activities. It is thus recommended that the staff managing this programme should develop a more formalised, and documented, delivery strategy for this part-time mode of study. (see https://jime.open.ac.uk/articles/10.5334/jime.470)

2.2.4.
Internships and Sea Practice
The inclusion of a fully supported, and STCW mandated, internship/sea practice period is a particular strength of this programme. A number of agreements are in place with local shipping companies to support this vital activity. This important cornerstone of the programme is essential to meet STCW certification requirements and the practical professional training opportunities that this provides must not be understated. The internship programme, as described in the documentation (SAR pp. 240-243), is well managed with the final internship results fully logged and considered in the "Practitioner's Logbook for Ship's Master" (SAR p.242). These details are also confirmed in a suitable report, prepared according to RTU LMA guidelines, upon completion of the period at sea. This internship report, which must be defended, fully records the professional skills and competences acquired during time at sea. This student-centred professional approach to skill and competence acquisition, and recording, is to be commended. The maintenance and, where possible, the continual improvement of this approach must remain of paramount importance to the course delivery team going forward. Taken together all of the above stated elements are a very good indicator of best practice being applied in accordance with Latvia Cabinet Regulation No. 793.

2.2.5.
N/A

2.2.6.
Final Assessment and Thesis (Graduate Professional Attributes)
The final assessment of the course includes a comprehensive Speciality Examination, a State Maritime English Examination and the defence of a Reviewed Thesis. This thesis must include both theoretical and practical research components. The requirement for a final thesis defence (SAR

p.244) is recognised here as a strength of the programme, and is entirely appropriate for this level of study. In addition, the requirement for the oral defence of an individual thesis ensures that a graduating student from this programme has attained the necessary professional skills and competences appropriate for employment in the maritime sector.

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:
This programme is very strong and well-developed. It is confirmed here that it is fully effective in its stated aims of providing good, competent Navigators (Navigation 44525) for the maritime sector. The programme's compulsory courses are all delivered to the STCW international standard, and are appropriate for the professional nature of the programme. The final assessment of the programme, which includes a managed internship period at sea, is very good and includes the preparation and defence of a Diploma Thesis, a Maritime English Examination and a comprehensive Qualification Examination in accordance with STCW codes, including the Manila amendments. Recruitment to this programme currently remains a serious issue. However, the merger of LMA with RTU should provide the combined institutions with suitable opportunities to attract more students onto the course. This, coupled with LMA’s established reputation as a premier Maritime Training Academy, must be exploited to full effect to ensure the continuation of this professional Navigation programme.

Strengths:
1. Effective delivery formats providing good study flexibility.
2. Professional preparation. Feedback obtained from alumni and employers confirmed that this programme provided excellent professional preparation for employment as a Navigator.

Weaknesses:
1. Management course. Feedback from former students suggests that the inclusion of more “soft” management topics such as communication, leadership, conflict resolution and adaptability are required.
2. Part-time study. A more detailed formalised part-time study framework is required.

Assessment of the requirement [5] (applicable only to master's or doctoral study programmes)

1 R5 - The study programme for obtaining a master's or doctoral degree is based on the achievements and findings of the respective field of science or field of artistic creation.

Assessment of compliance: Not relevant

2.3. Resources and Provision of the Study Programme

Analysis

2.3.1.
Study visit confirmed that RTU LMA has enough resources to deliver a navigation programme without shortcomings. During the tour of facilities the experts had an opportunity to see the different simulators used in the implementation of the study programme.
According to SAR p.242, there are available such common equipment for the implementation of the study programme Navigation as projectors and screens, interactive whiteboards, copiers, printers, scanners, portable computers and other multimedia equipment.
During the tour of facilities the experts had an opportunity to see the different simulators used in the implementation of the study programme. For instance, full mission Bridge Simulators provides

students with the competence “To carry out navigational watch”. There are many other examples of successful use of simulators and the relevant equipment in the study process – GMDSS, ECDIS, RADAR/ARPA and Liquid Cargo Handling simulator. For instance:
· GMDSS simulators, specifically the Transas TGS-5000 (with 10 workstations), are utilized in the course "Communication Organization and GMDSS."
· The "NAPA Loading Computer" is employed to solve various practical tasks in study courses such as "Ship Cargo Transportation Technology," "Ship Theory," and "Ship Construction and Operation."
· The study course "Ship Navigation Equipment" is equipped with a training room containing traditional ship navigation instruments and the PK-2306 Satellite Compass.
· The study courses "Navigation," "Maritime Astronomy," and "Navigation Meteorology" are facilitated by training rooms furnished with chart tables, instruments, paper charts, and collections of navigation publications.
Compulsory STCW short training courses are conducted both in the premises of the Training Center in the RTU campus and on the pontoon "Kadets," which is equipped with specialized technical equipment corresponding to the specific course programme approved by the Registry of Seamen (e.g., lifeboats, life rafts, firefighting equipment, towing and mooring devices, first aid kits etc.).
During the on-site visit experts gathered confirmation that the students and teaching staff have an access to subscribed databases for studying and research purposes, including:
· EBSCO: Access to full-text and review databases in the humanities, social sciences, and exact sciences. Collection: National package Academic Search Complete.
· EBSCO: INSPEC: Access to full-text database in the exact sciences.
· KR - CON:2: Access to a subscription code for a specialized maritime regulatory document database.
· International Maritime Organization (IMO): Database of current IMO documents.
It's important to mention that RTU Library provides access to previous years' students' theses/projects, methodological materials prepared by LMA teaching staff and the latest navigation publications and textbooks relevant to the study programme.
All necessary study materials, including course descriptions, are uploaded to the study e-platform OMARS. The platform is regularly updated to ensure convenient access to study materials for both teaching staff and students.
According to SAR p.248, the review of the study program's methodological and informational support, as well as the determination of procurement and improvement measures, takes place at least once during the academic year, through the preparation of annual reports and quality objectives by the relevant structural units of LMA for the upcoming accreditation review period.

2.3.2.
N/A

2.3.3.
The funding available for the implementation of the study programme according to SAR p.250, comes mainly from fees from students (part-time, fee-paying students as well as fees for retaking exams). Number of students is very small (like 7). There are just part-time students. RTU LMA might probably look for economic closure of this programme, however in conjunction with others (costs are shared and whole costs are constant), the RTU LMA may have interest to maintain this programme in the offer.

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:
The funding available for the implementation of just this study programme seems to be not

sufficient to ensure the study process alone. However this programme is run sharing costs with the other programmes in the same field - for this reason, the overall costs for HEI are constant and the LMA can also run complementary programmes even on a smaller scale like in this case. Study infrastructure, equipment, and simulators available for the study programme “Navigation (44525)” are modern and correspond to the goals and planned results of the programme.

Strengths:
-

Weaknesses:
1. Tuition revenue is too low to run the programme just alone.

Assessment of the requirement [6]

1 R6 - Compliance of the study provision, science provision (if applicable), informative provision (including library), material and technical provision and financial provision with the conditions for the implementation of the study programme and ensuring the achievement of learning outcomes

Assessment of compliance: Fully compliant

Justification: Study infrastructure, equipment and simulators available for the study programme are modern and correspond to the goals and planned results of the programme. The funds required to provide education come from tuition fees and other fixed costs of the RTU-LMA.

2.4. Teaching Staff

Analysis

2.4.1.
The qualification of the teaching staff involved in the implementation of the study programme "Navigation" complies with the conditions for the implementation of the study programme and the requirements of regulatory enactments. The qualification requirements for lecturers at maritime education institutions and training centres are determined by the Cabinet of Ministers Regulation No. 710 of December 15, 2015, "Regulations on Certification, Implementation, and Monitoring of Professional Preparation Programs for Seafarers."
The education obtained for all teachers is practically directly related to the specific field of science, as also they possess the necessary research skills and expertise to provide students with the required learning outcomes within the scope of the conducted courses in accordance with STCW and higher education requirements (SAR, Study Programme "Navigation" (44525), 3.4. Teaching Staff, 3.4.1.). The faculty members engaged in the implementation of the study programmes are qualified with completed higher education degrees. All staff members teaching specialised courses within the study programme have obtained the appropriate instructor-evaluator certificates and regularly update their competencies and knowledge.
Number of teachers and other personnel ensure delivery of intended learning outcomes in the programme. As said in SAR and confirmed during visit the teaching staff (number, qualification) complies with the requirements specified in Law on Higher Education Institutions. The teaching personnel (instructors, supervisors and assessors) of the general and professional subjects are education and/or maritime professionals with the relevant seafarer’s qualification, and with the relevant seagoing service. Totally, 32 lecturers, including 6 professors, 3 associate professors and 13 docents, from the RTU LMA staff are involved in the first cycle study programme, which is designed after completing the short cycle study programme. The compliance of visiting professors,

associate visiting professors, visiting docents, visiting lecturers, and visiting assistants is evaluated based on the Regulations No. 4 "On the Management of Academic Staff at the Latvian Maritime Academy" of the Latvian Maritime Academy. Lecturers with extensive professional work experience in the field are also involved in the implementation of the study programme.
The personnel of RTU LMA actively participate in training courses organised by the LMA Training Center, as also professional English language and instructor-evaluator courses. In overall, qualification enhancement is promoted both locally and internationally by RTU LMA management.

2.4.2.
Teaching staff seems to be stable for a longer period of time taking into account their competences but considering also quite a high average age. Teachers are enthusiastic, they provide good support for the operation of the Academy. Based on the SAR, there have been no significant changes in the composition of teaching staff during the reporting period, which is explained by the inability to ensure the change of generations of teaching staff due to financial considerations – uncompetitive remuneration in the higher education sector compared to the remuneration received by industry experts in the private sector. Although the low level of remuneration does not encourage the active involvement of new teaching staff in the work at LMA, previously conducted audits confirm a good level of provision of teaching staff in promoting the quality and sustainability of the study programme. Overall, as staff work in multiple jobs this could lead to overload affecting the quality of the teaching process. In general, teaching staff of various levels and professional qualifications are involved in the implementation of the study programme.

2.4.3.
N/A

2.4.4.
10 teaching staff members from all have 69 publications in the last 6 years, mainly for professors, assoc. professors and docents. The rest of the teaching staff has more than 5 years of practical work experience in the industry. The analysis is based on the staff CV (II - Description of the Study Field - 2.3. Resources and Provision of the Study Field; Annex CV ENGv2.zip) and list of publications (II - Description of the Study Field - 2.4. Scientific Research and Artistic Creation; Annex Publications-Patents-Conferences ENG v2.zip).

2.4.5.
Interviews confirmed that faculty collaborate with each other through various mechanisms (informal meetings of teaching staff, departmental meetings, discussions on study outcomes and quality assurance principles, and other events) established by the LMA. At least once a month, structural unit meetings are organised to promote not only mutual communication between employees, but also to discuss current issues related to the study and scientific process. The improvement of study courses is based on the suggestions of both students and teaching staff and members of the state examination commission. The director of the study programme tries to actively cooperate with the teaching staff, willingly listens to suggestions and makes improvements to the study programme.
In addition to that, the LMA also has informal faculty meetings, which allow discussing current issues in an informal atmosphere, and then, in the event of a formal decision, inform the heads of the structural units about it and include the issue in the structural unit's meeting.

Conclusions on this set of criteria, by indicating strengths and weaknesses

Conclusions:
The qualification of the teaching staff involved in the implementation of the study programme

complies with the conditions for the implementation of the study programme and requirements of regulatory enactments. The qualification of the teaching staff is on a good level, but the scientific activities should be improved, as they can only be observed for 1/3 of the teaching staff. There have been no significant changes in the composition of teaching staff during the reporting period while attracting new staff is complicated due to a non competitive remuneration. At the same time LMA takes the necessary steps to ensure that constant staff size does not affect the quality of studies. Cooperation between the teaching staff and the director of the study programme is at a good level, which ensures the appropriate flow of information between the director of the study programme and the teaching staff.

Strengths:
1. Communication is at a good level between the staff and the study programme director.
2. Lecturers from maritime industry companies are involved in the study process.

Weaknesses:
1. Staff overload is possible for teaching staff trying to combine work at RTU LMA and one or more companies

Assessment of the requirement [7]

1 R7 - Compliance of the qualification of the academic staff and visiting professors, visiting associate professors, visiting docents, visiting lecturers and visiting assistants with the conditions for the implementation of the study programme and the requirements set out in the respective regulatory enactments.

Assessment of compliance: Fully compliant

Justification: The qualification of the teaching staff involved in the implementation of the study programme complies with the conditions for the implementation of the study programme and the requirements of regulatory enactments.

2.5. Assessment of the Compliance

Requirements

1 1 - The study programme complies with the State Academic Education Standard or the Professional Higher Education Standard

Assessment of compliance: Partially compliant

Annex (“ P06_UIV0(44525)_AtbilstibaValstsStandartam_LVv2.docx”) confirms that the study programme complies with Cabinet Regulation No. 305 “Noteikumi par valsts profesionālās augstākās izglītības standartu”. C part of the study programme should not just consist of a predefined list of courses, but offer the flexibility to take any course as part of the C section.

2 2 - The study programme complies with a valid professional standard or the requirements for the professional qualification (if there is no professional standard required for the relevant occupation) provided if the completion of the study programme leads to a professional qualification (if applicable)

Assessment of compliance: Fully compliant

Annex (“ P07_3.2.1._UCZ0(42525)_AtbProfStand_2lim-LVv3.docx) confirms that the programme complies with the professional standard "Navigator (at management level)" approved on October 16, 2013

3 3 - The descriptions of the study courses and the study materials have been prepared in all languages in which the study programme is implemented, and they comply with the requirements set forth in Section 561 , Paragraph two and Section 562 , Paragraph two of the Law on Higher Education Institutions.

Assessment of compliance: Fully compliant

Attached study course descriptions (“SKA KVII_LVv3.zip”) are prepared in Latvian and English. Descriptions comply with regulations set forth in Law on Higher Education Institutions.

4 4 - The sample of the diploma to be issued for the acquisition of the study programme complies with the procedure according to which state recognised documents of higher education are issued.

Assessment of compliance: Partially compliant

The provided Diploma sample (“ KV-bak-diploms&pielikumsv2LV.zip) partially complies with the procedure by which state-recognised documents of higher education are issued in accordance with Cabinet Regulation No. 202 “Kārtība, kādā izsniedz valsts atzītus augstāko izglītību apliecinošus dokumentus” as provided sample contains only 3rd page of diploma and supplement. Diploma supplement is outdated.

5 5 - The academic staff of the academic study programme complies with the requirements set forth in Section 55, Paragraph one, Clause 3 of the Law on Higher Education Institutions.

Assessment of compliance: Not relevant

6 6 - Academic study programmes provided for less than 250 full-time students may be implemented and less than five professors and associated professors of the higher education institution may be involved in the implementation of the mandatory and limited elective part of these study programmes provided that the relevant opinion of the Council for Higher Education has been received in accordance with Section 55, Paragraph two of the Law on Higher Education Institutions.

Assessment of compliance: Not relevant

7 7 - At least five teaching staff members with a doctoral degree are among the academic staff of an academic doctoral study programme, at least three of which are experts approved by the Latvian Science Council in the respective field of science. At least five teaching staff members with a doctoral degree are among the academic staff of a professional doctoral study programme in arts (if applicable).

Assessment of compliance: Not relevant

8 8 - The teaching staff members involved in the implementation of the study programme are proficient in the official language in accordance with the regulations on the level of the official language knowledge and the procedures for testing official language proficiency for performing professional duties and office duties.

Assessment of compliance: Fully compliant

Attached resumes of staff (“CV ENGv2.zip”) and confirmation (“Confirmation - knowledge of the state language.edoc”) verifies that state language proficiency is compliant with Cabinet Regulation No. 733 "Noteikumi par valsts valodas zināšanu apjomu, valsts valodas prasmes pārbaudes kārtību un valsts nodevu par valsts valodas prasmes pārbaudi".

9 9 - The teaching staff members to be involved in the implementation of the study programme have at least B2-level knowledge of a related foreign language, if the study programme or any part thereof is to be implemented in a foreign language (if applicable).

Assessment of compliance: Fully compliant

Attached resumes of staff (“ CV ENGv2.zip”) and confirmation (“Confirmation - knowledge of the foreign language.edocs”) verifies that language proficiency in English is at least B2.

10 10 - The sample of the study agreement complies with the mandatory provisions to be included in the study agreement.

Assessment of compliance: Fully compliant

Sample of attached study agreement (“ Sample_of_study_agreement.zip”) complies with Cabinet Regulation No. 70 "Studiju līgumā obligāti ietveramie noteikumi”.

11 11 - The higher education institution / college has provided confirmation that students will be provided with opportunities to continue their education in another study programme or another higher education institution or college (agreement with another accredited higher education institution or college) if the implementation of the study programme is terminated.

Assessment of compliance: Fully compliant

Attached contracts (“Līgumi par studiju parnemšanu ENG.zip”) confirms that the institution provides the possibility to continue studies within the following option: Lithuanian Maritime Academy professional bachelor programme “Marine Navigation”.

12 12 - The higher education institution / college has provided confirmation that students are guaranteed compensation for losses if the study programme is not accredited or the study programme’s license is revoked due to the actions (actions or omissions) of the higher education institution or college and the student does not wish to continue studies in another study programme.

Assessment of compliance: Fully compliant

RTU confirmation (“Confirmation - on compensation for losses.edoc”) states, that students are guaranteed compensation for losses if the study programme is not accredited or the licence of the study programme is revoked due to the actions of the college (actions or failure to act) and the student does not wish to continue the studies in another study programme.

13 13 - The joint study programmes comply with the requirements prescribed in Section 55.(1), Paragraphs one, two, and seven of the Law on Higher Education Institutions (if applicable)

Assessment of compliance: Fully compliant

14 14 - Compliance with the requirements specified in other regulatory enactments that apply to the study programme being assessed (if applicable)

Assessment of compliance: Fully compliant

Annex (“Atbilstība atbilstošās nozares specifiskajam normatīvajam regulējumam KV-lv2.docx”) confirms, that programme complies with STCW Convention and relevant EU and Latvian regulatory requirements such as Directive (EU) 2022/993 of the European Parliament and of the Council of 8 June 2022 on the minimum level of training for seafarers, Maritime Administration and Marine Safety Law (LV), Regulations Regarding the Medical Fitness of Seafarers for Work on a Ship (LV), Regulations Regarding Certification of Seafarers (LV), Regulations Regarding Certification, Implementation, and Monitoring of Professional Training Programmes for Seafarers (LV).

Assessment of the requirement [8]

1 R8 - Compliance of the study programme with the requirements set forth in the Law on Higher Education Institutions and other regulatory enactments.

Assessment of compliance: Partially compliant

Study programme generally complies with regulatory enactments. The provided diploma sample is only partial. Diploma supplement is outdated. Free elective parts should provide flexibility for students to take any courses.

General conclusions about the study programme, indicating the most important strengths and weaknesses of the study programme

Conclusions:
Second level professional higher education study programme “Navigation" (44525)” is well-developed, producing highly competent professionals aligned with STCW standards for the maritime sector. With a strong employment outlook and positive feedback from graduates and industry employers, the programme is effective in training skilled Navigators to operate as “Officer of the Watch”. Key strengths include LMA’s established reputation as a leading Maritime Training Academy, up-to-date simulators and training facilities, and flexible course delivery formats. The final assessment of the programme, which includes a managed internship period at sea, is very good and includes the preparation and defence of a Diploma Thesis, a Maritime English Examination and a comprehensive Qualification Examination in accordance with STCW codes, including the Manila amendments. Recruitment to this programme currently remains a serious issue. Despite these strengths, challenges persist, particularly in declining student recruitment, limited support for remote learning, and a need for soft skills training, including communication and leadership. The recent merger with RTU offers potential to improve recruitment, while a more robust part-time study framework and recruitment strategy are also needed. The teaching staff meets regulatory standards, although research activities are limited and attracting new faculty remains difficult due to non-competitive pay. While good communication exists between programme directors and staff, there is some risk of staff overload due to faculty balancing academic roles with industry work. The qualification of the teaching staff is on a good level, but the scientific activities should be improved, as they can only be observed for 1/3 of the teaching staff. Attracting new staff is complicated due to a non competitive remuneration. At the same time LMA takes the necessary steps to ensure that constant staff size does not affect the quality of studies.Overall, the programme is strong but could benefit from strategic improvements in recruitment, curriculum, and staff support.

Strengths
1. Reputation. The LMA has an established reputation as a premier Maritime Training Academy. This is a particular strength that must be exploited more vigorously to recruit more students.
2. Up to date training facilities and simulators. A strong indicator of best practice.
3. Professional preparation. Feedback obtained from alumni and employers confirmed that this programme provided excellent professional preparation for employment as a Navigator.
4. Lecturers representing industry are involved in the study process.

Weaknesses
1. Distance Learning. The programme team should develop a more formalised strategy to provide effective distance learning support.
2. Student Recruitment. The decreasing student numbers seen in maritime programmes is a cause for concern. This should be managed as a matter of urgency through the development of a more robust recruitment strategy directly aimed at potential Latvian students.
3. Management course. Feedback from former students suggests that the inclusion of more “soft” management topics such as communication, leadership, conflict resolution and adaptability are required.
4. Staff overload is possible for teaching staff trying to combine work at RTU LMA and one or more

companies.

Evaluation of the study programme "Navigation"

Evaluation of the study programme:

Good

2.6. Recommendations for the Study Programme "Navigation"

Short-term recommendations

1. Ensure that free elective - C - part provides flexibility for students to take any courses.
2. Define modules or courses regarding entrepreneurial skills as required by state professional education standards.
3. Provide a full diploma example with an updated supplement

Long-term recommendations

1. Develop and implement a suitable student recruitment strategy due to an ongoing reduction in student numbers.
2. Feedback from former students suggests that the inclusion of more “soft” management topics such as communication, leadership, conflict resolution and adaptability are required.
3. Develop a more detailed formalised part-time study framework.
4. Develop a strategy to increase the number of students making the programme economically unjustifiable to run it.
5. Director of the study programme should control the workload of the teaching staff in order to avoid a decrease in the quality of teaching.
6. Director of the study programme should pay attention to the maximum involvement of all staff in various scientific activities (writing publications, participating in projects, etc.) trying to find the potential contribution of each employee.
7. Director of the study programme should develop a more formalised strategy to provide effective distance learning support.

II - "Maritime Transport" ASSESSMENT

II - "Maritime Transport" ASSESSMENT

2.1. Indicators Describing the Study Programme

Analysis

2.1.1.
As described the programme aims and objectives are in keeping and relate directly to the stated requirements of the Latvian Classification of Education (SAR p.133) for a masters level programme. The programme, which can be studied in English or Latvian, is delivered in both full-time (1.5 years) and part-time (3 years extramural) formats. The documentation provided describes the course refinements made in accordance with the Manila Amendments to the STCW Convention (2016) at

the management level as requested during the previous assessment and accreditation. In addition, evidence provided during the interview indicated that a good training needs analysis has been conducted to enhance the maritime context of the programme. In this context, the current accreditation team has some concerns relating to the “professional” nature and claim of the programme. Going forward some additional strengthening changes will be required to align the technical areas of the programme more fully with its intended professional focus. However, as a masters programme, without the inclusion of the term “professional” in the title it can be confirmed that this programme is fully effective for this level of study.

Field of Study
The detailed documentation fully defines the field of study and the preparation of graduates for a career as master engineers supposed to act in the maritime transport related professions. Successful completion of this study programme should assure highly skilled graduates with the competence to manage and operate either in a port or on board thus ensuring the safety of the ship and its crew. A crucially important issue nowadays is the reduction of the fuel consumption on board, thus contributing to the reduction of the level of greenhouse gases emissions. From this point of view, it may be appreciated that both the field of study and the study programme provide broadened information to the students. Since the last accreditation the study field underwent several modifications. The programme was moved from the previous study field "Mechanical Engineering and Metalworking, Thermal Energy Engineering, Heat Engineering, and Mechanical Engineering" and included in the study field "Seafaring", to align with the provisions of the Regulation No. 793 of 11 December 2018 "Regulations on the Opening and Accreditation of Study Fields" of the Cabinet of Ministers of the Republic of Latvia.

2.1.2.
Programme Title
Although rather general, the programme title may be considered as appropriate since it covers many issues of the maritime transport so that one may appreciate that the programme may provide the graduate with wide high quality knowledge needed for high quality management-level specialists acting in the maritime sector at an international level. During the evaluation period, the programme name has not changed. However, considering the industry's need for management specialists with advanced knowledge, skills, and competence in engineering, the programme specialisation "Maritime Transport Management" was transformed into an interdisciplinary one, namely "Maritime Transport Management Engineering," as decided by the Senate of the Latvian Academy of Sciences in 2015. This change aligns with the trends in developing study programmes abroad. The study programme code according to the Latvian Classification of Education has also been changed multiple times to align with the changes/requirements of the relevant national regulations. The current code is 47525, in accordance with the requirements of the Regulation Cabinet of Ministers No. 322/ 2017 (RCM 322 hereafter) "Regulations on the Latvian Classification of Education. However, in order to ensure the fulfilment of the requirements of RCM 305/ 2023 "Regulations on the Standard of State Professional Higher Education", the Council of LMA decided "To retain the Master's programme "Maritime transport" as a professional one, thus granting a professional qualification of level 7. At the previous evaluation, the programme was only offered in Latvian language. However, starting from the academic year of 2017/2018 the programme is taught in English as well.

Aims of the Programme and tasks
During the evaluation period, the programme objective has been changed multiple times to ensure compliance with Regulations by the Cabinet of Ministers and the Development Strategy of the Latvian Maritime Academy, as well as to better reflect the general purposes of the programme

implementation. In spite of the multiple changes, the SAR reveals that the programme aims and objectives are clear and well-articulated, being related directly to the specified mission and stated vision of the Latvian authorities.
During the evaluation period, the programme tasks have been changed multiple times to ensure compliance with the sector needs and the Development Strategy of the Latvian Maritime Academy, as well as to reflect more accurately the specific purposes of programme's implementation. The "Change Management and Implementation Plan for the Modernization of Study Program Offers at the Latvian Maritime Academy" developed as a result of the implementation of the SAM 8.2.3 project of the European Union's Operational Program "Growth and Employment" 8.2.3 specific support objective "Improving Governance in Higher Education Institutions". In addition, there is clear evidence throughout the programme documentation of a thorough, and ongoing, training needs analysis having been conducted in a professional manner and pertaining to the maritime engineering context. New programme courses were developed and a comprehensive statement of the learning outcomes was defined, with the regard paid to the delivery of STCW-78 requirements and to the incorporation of the essential subsequent amendments.

Programme duration
Since the previous evaluation, the study programme is offered in two formats: a full-time on-site for 1.5 years, and a part-time distance learning for 1.5-3 years, which has not changed during the evaluation period. Here one may raise a doubt on the relativity of the study period varying from one and a half years to three years. Who is deciding this and based on which measurable facts.
Admission to the study programme
Following the previous evaluation, in 2023 the admission requirements have been specified more precisely, i.e. "First-cycle professional higher education and sixth-level professional qualification in maritime or transport services, or equivalent education" were required.
Admission to the full-time studies in the professional Master's study programme – relevant professional bachelor's or professional higher education, for graduates of comparable study programmes - fulfilment of the additional requirements. For full-time admission, LMA applicants could apply by submitting their documents in person, except for foreigners, who could send their documents by e-mail to the email address: info@latja.lv. The main reason for submitting documents in person was that electronic registration via the common platform latvija.lv is a relatively expensive service, and by submitting documents in person the responsible secretary of the Admissions Committee could immediately check whether the documents had been submitted correctly, especially for seafarers' medical certificates as required by law. The admission results were published on the LMA website. On the basis of the decision of the Admissions Committee, the applicants sign a study contract within the time limit set by the Admissions Committee and are matriculated by the Rector's order. If an applicant who applied for a state-funded study place did not sign a study contract within the set deadline, the LMA Admissions Committee offered it to the next candidate who was admitted to study for a tuition fee in the given study programme, according to his/her ranking.
Admission to the part-time study programme for professional Master's study programmes: professional bachelor's or professional higher education diploma; for graduates of comparable study programmes: fulfilment of the additional requirements. The admission procedure and requirements for part-time studies were regulated by the same procedure, regulations and rules as mentioned in the description for full-time studies, as well as by Regulation No. 16 of 29 March 2004 "On part-time studies at Latvian Maritime Academy".On the basis of the decision of the Admissions Committee, within the deadline set by the Admissions Committee, applicants sign a contract for studies in the chosen part time study programme at LMA and are matriculated by the Rector's order.
Degree, professional qualification, or degree and professional qualification awarded
Since the last evaluation, the professional Master degree in maritime transport has not changed till

June 2023, when the regulations of the Cabinet of Ministers No. 305 were adopted, according to which a master degree and the seventh-level professional qualification are awarded after completing the programme. To fulfil the requirements of that Regulation, the LMA Council adopted a protocol, which stipulated that the Master's programme "Maritime Transport" is continued as a professional one, while awarding the 7th level professional qualification.
Since the beginning of the actual study course evaluation period, the RTU Latvian Maritime Academy, in accordance with the requirements of the Law on Higher Education Institutions of the Republic of Latvia and other relevant regulatory acts, has awarded the graduates of the programme a professional Master degree in maritime transport till the end of June 2024. But taking into account the multiple changes in the Law on Universities and the new Regulation of the Cabinet of Ministers No. 305 (RCM 305 hereafter) requirements, according to which a master's degree and seventh-level professional qualification are awarded after completion of the master study programme, RTU Latvian Maritime Academy has developed another change plan for the study programme "Maritime transport", which is, ahead of all, a very less predictable act. The reviewer wonders how all these multiple changes are meant to help the candidate to understand what is all about in a system which is changing continuously, sometimes without a reasonable reason.

Achievable study outcomes of the programme
During the evaluation period, the achievable study outcomes of the programme have been changed multiple times to ensure compliance with the current Regulations by Cabinet of Ministers, and the Development Strategy of the Latvian Maritime Academy, as well as to more accurately reflect the specific outcomes. In addition, the "Change Management and Implementation Plan for the Modernization of Study Program Offerings at the Latvian Maritime Academy," developed as a result of the implementation of the Latvian Maritime Academy's SAM 8.2.3 project, has been taken into account. Achievable study outcomes of the programme fully conform to the RCM 305.
Learning Provision and English Language Programme Support
It is stated in the SAR (p.134) that the programme can be studied over 1.5 years full-time and 1.5-3 years part-time, both in Latvian and English. Despite this assertion some additional details are required on how this part-time extramural study approach (SAR p.147-148) and study plan is implemented and managed within the time scales indicated. Staff delivering this programme should develop a more formalised part-time study framework to support, and retain, these part-time students. This should demonstrate how this study mode aligns with, and is equivalent to, the full-time programme.
The documentation provided also states that the programme is designed to be delivered in English (SAR p.134), and has been done for a number of years. This mode of delivery is to be applauded and will enhance international student recruitment efforts. This will be particularly beneficial to improving the severely dwindling student numbers on the programme. However, the SAR provides very little detail regarding how the English programmes will be operationally delivered and assessed. It is suggested that the course team fully develop a suitable and robust strategy for this delivery mode.
The master study programme "Maritime Transport" is linked to the maritime transport industry and to the only Latvian study field in the domain, i.e. "Seafaring". The study programme corresponds to one of the main objectives of the Bologna Declaration - the implementation of a three-cycle degree system. It provides higher education at the master level in RTU LMA - the only institution of higher maritime education and research in Latvia which offers study programmes at all three levels. The present evaluated programme contributes to the fulfilment of the prescribed tasks and objectives of the study field "Seafaring" and to the main goal of providing sustainable, multi-level, higher professional maritime education, thereby providing the economy of Latvia with academically educated and job market-ready specialists. The programme aims at deepening and expanding the level of knowledge for its students with data related to the industry's actual situation, its

development trends in areas such as shipping infrastructure, ship technology and engineering, and other connected areas such as shipping digitization, problem-solving, research and innovation work, shipping and environmental management. The interconnections between the programme name, code, degree, professional qualification, goals and objectives, expected study outcomes, and admission requirements have been ensured during the multiple changes/developments of the programme. A systematic assessment of the needs and specific requirements of the maritime transport industry has proven to be effective for the improvement of the learning outcomes of its graduates. As mentioned above, the academic degree and professional qualification to be obtained have been determined in accordance with the requirements of the Law on institutions of higher Education and the RCM 305. The master degree and the seventh level professional qualification is obtained by a student after completing the programme. The same regulation represents the basis on which the objectives and specific tasks of the study programme are set. The expected study outcomes are established in accordance with the programme's objectives being in accordance with the 7th level knowledge, skills, and competencies defined in the Latvian/European Qualifications Framework. The expected outcomes of each individual study course are determined with the consideration that the integrated set of outcomes across all courses in the programme ensures the achievement of the study program's outcomes. The interconnection of the admission requirements with other programmes has been ensured during the review period. Graduates of various bachelor and professional higher education study programmes in the maritime sector, including graduates of the "Naval Military Leadership" at the National Defense Academy of Latvia, as well as graduates of other relevant study programmes can be enrolled as master students if they pass the entrance examination.

2.1.3.
Assessment Field Parameters
The underpinning professional maritime management focus of the programme attempts to meet the specific needs of STCW (Convention on Standards of Training, Certification, and Watchkeeping) and the IMO (International Maritime Organisation). The programme builds on the previous first cycle maritime programmes and strengthening changes, through increased credit points, have been made to both numerical and technical areas of the curriculum. Although participant numbers are quite small in number and seem to be diminishing, this new version of the degree, with appropriate amendments, is a positive step towards increasing recruitment.

RTU LMA Merger Opportunity
The recent merger of LMA with RTU has provided the University with the equipment to enhance a number of study programmes. With regards to masters study programmes in particular, access to improved Library and online facilities, as well as the amendment inclusion of University research groups will markedly enrich the learning experience of students at level 7.
The SAR states at Section 3.1.3, page 139 that the evaluated programme is economically and socially justified by invoking the fact that the master study programme "Maritime Transport" at RTU LMA is the only second-cycle professional higher education study programme in Latvia that prepares master level maritime specialists for the Latvian transport industry. The students of the Master's study programme "Maritime Transport" are in demand in the job market not only after completing their studies but also during their studies. This is evidenced by the fact that practically all the students enrolled in the programme are employed in various maritime transport companies/organisations in positions corresponding to their professional qualifications. The SAR invokes Annex P8 in which annual surveys of graduates and employers are provided (unfortunately, the evaluator could not find the Annex P8), therefore there is no evidence of the preparedness level of graduates of the study programme, neither of the relevance of their knowledge, skills, and competencies to the current and future needs of the maritime transport industry.

The SAR states that RTU LMA is in unanimous agreement on the necessity of graduates from the study programme "Maritime Transport" for the industry, employers, etc. who encourage programme's implementers to continue improving the programme and pay even more attention to current industry issues such as environmental management, cybersecurity, digitalization, the impact of the political situation on the industry, etc. They also emphasise the importance of providing students with practical knowledge, skills, and competencies that are highly valuable in their professional careers. Neither this information could be verified by the evaluator.

2.1.4.
Social and Economic Justification
The social and economic need for this masters programme has been fully explained in the SAR (p.139), and during an interview with the programme director. In addition, feedback obtained from experienced alumni indicated that this masters programme provided them with excellent continued development after their first job at sea or undergraduate graduation. This strength was also demonstrated during interviews with local shipping employers. It is thus confirmed that there is a strong continuing need for this type of masters level study programme.
During the evaluation period, two study forms were used in the Master's study programme "Maritime Transport", regardless if it is a full-time or a part-time one. The main teaching language is Latvian, but starting from the 2017/2018 academic year, English is also used.
The number of admitted students in full-time studies throughout the reporting period practically corresponds to the number of budget-funded places. During this time, only a few students have opted for the paid full-time study mode. Particularly high numbers of admissions (26) were recorded in the academic year 2019/2020 when the academy increased the number of budget-funded places and organised winter admissions for the first time in addition to summer admissions, which continued in the following three academic years. Here a question related to the correctness of the winter admission may be raised. Most of the admitted full-time on-campus students graduated the bachelor programme at RTU LMA and only 12% graduated from other HEIs. The dynamics of the number of students' enrolment unveils relatively small numbers, a fact that may raise a question related to the financial efficiency of the master programme.
The situation of those who graduate looks even worse, the number of those who fulfil all the requirements for graduation is even smaller (usually around 30% or even less). The provided data also reveals a significant number of students who have dropped out of the programme. The SAR offers several explanations for this, including immediate enrollment in the programme after completing a bachelor's degree and leaving the programme after receiving attractive job offers, the inability to combine studies with professional work, family circumstances, change of study format, and others.
The number of admitted students in part-time distance learning is significantly smaller. This study format is primarily used by professionals whose work activities are not compatible with full-time studies, and often students who have started the programme in full-time mode continue their studies at a slower pace in this form.
Summing up, since June 2009, when the first two part-time distance learning students graduated from the master programme "Maritime Transport," a total of 155 graduates have obtained a professional master degree in maritime transport, which means an average of 10 students per year. This includes 101 graduates during the evaluation period, of which 87 completed full-time studies and 14 completed part-time distance learning (about 9% in respect to those who graduated the programme since 2009).

2.1.5.
N/A

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:
As documented, and confirmed during the interview, this masters programme provides an effective level of postgraduate study. Concerns have been raised regarding its “professional” nature of the programme and it is requested that the course team consider making suitable changes to strengthen this aspect, particularly if the programme is to be promoted and advertised as a “professional” maritime transport masters. If no strengthening changes are made, then it is further suggested that the programme name be changed to Maritime Transport (Masters). There is the potential here for two similar programmes to be offered, so increasing student recruitment opportunities.

Strengths:
1. Strong supporting academic and quality assurance framework with excellent further development opportunities as the RTU LMA merger matures.
2. The merger of LMA with RTU has provided excellent opportunities for enriched masters study.

Weaknesses:
1. The intended “professional” nature of the programme. Additional strengthening changes will be required to align the technical areas of the programme with its intended professional focus.
2. Part-time study. A more detailed formalised part-time study framework is required.

2.2. The Content of Studies and Implementation Thereof

Analysis

2.2.1.
Study Programme Content
The overarching design and course mapping (SAR p.143) of this masters level programme has, in general, been well thought out. It is also honest in its assessment of previous deficiencies, such as the use of digital teaching methods and cooperative learning opportunities. Going forward these need to be addressed. The study programme is logically sequenced, is appropriate and suitable for masters level study for employment as a maritime transport manager. The inclusion of courses in Maritime Law and Communication Technology, and others (SAR p.143) are to be commended. However, as stated previously, the accreditation team have concerns regarding how the programme meets specific requirements and needs of the maritime sector. Further strengthening and development as required to ensure a stronger “professional” focus for the programme.
The content of the study programme is designed in accordance with the requirements of RCM 305 and taking into account the current and future specific needs of the maritime transport industry. The content consists of several interconnected courses that contribute to achieving specific outcomes. A contribution to ensuring the achievement of objectives, tasks, and outcomes has been provided by the course mapping since the 2016/2017 academic year and the implementation of activities within the LMA SAM 8.2.3. project "Enhancement and Adaptation of Existing Study Program Content to the Needs of Industry Development", which eventually resulted in the development of the plan "Change Management and Implementation Plan for the Modernization of LMA Study Program Offerings" in 2020. Main benefits of course mapping consisted in the improvements and alignment of the study programme and individual study course descriptors. The results of the correlations between courses and the professional standards is well described as proven in Table 1 at the end of this analysis.
The SAR claims that nine internship-related outcomes are defined by the curriculum, a fact that enabled the identification of weaknesses of the syllabi, such as the content duplications and or the

insufficiency of the covered topics. Based on all those mentioned above one may notice that the alignment and interrelation of objectives, tasks, and achievable outcomes of study courses with the study programme objectives and expected outcomes is ensured.
When evaluating the content of the study courses of the programme, it should be noticed that it is developed and reviewed rather regularly, usually before each academic year or as needed, in accordance with the current objectives, tasks, and achievable results of the programme. The necessary assessments, recommendations/suggestions, ideas, opinions, and advice for updating and ensuring the conformity of the content of the study courses of the programme are obtained from external expert’s recommendations, reports from the state examination commission on the dissertations theses defend, lectures by guest lecturers, ERASMUS mobility periods, formal and informal discussions with industry professionals, as well as surveys among students, graduates, and employers. The SAR did not provide any evidence for this. Several courses were either reshaped or replaced during the reporting period. However, the last modification was done in the academic year of 2020-2021, a fact that suggests that these actions are not permanent, as stated in the SAR. As far as the adjustment of the courses content to the development trends in the industry, labour market and science, the evaluator cannot have any opinion because the SAR does not include any proofing documents in this sense.
Upon completion of the programme, graduates will be awarded a Master's degree in Maritime Transport and the professional qualification of "Manager of Maritime Transport Processes" at the seventh level of the Latvian Qualifications Framework. This qualification was officially supported for inclusion in the qualification structure of the transport and logistics sector by the Council of Experts in Transport and Logistics on December 6, 2023, following a proposal from LMA (SAR p. 135). At the time of assessment visit professional standard has not been fully approved yet. However, the study programme plan does not include a free elective - C - part, therefore some further clarifications are needed as C part should not consist of a predetermined list of courses.

2.2.2.
Teaching and Learning Strategy
The proposed use of student-centred learning opportunities and an independent thesis (SAR p.145), is a clear indicator of good modern practices being utilised effectively. This is a particular strength of this programme of study and should develop a strong independent set of study skills and competences. An important cornerstone of any Master’s Programme. The requirement and importance of these research-led opportunities for learning must not be understated. The maintenance and continual improvement of this approach must remain of paramount importance to the course delivery team going forward.
Masters Attributes
The final assessment on completion of the programme, a state examination - Master’s Thesis development and defence is entirely appropriate for this level of study. In addition, the requirement of developing and defending a thesis should ensure that a graduating student from this programme has attained all of the necessary skills and competences required for employment in the maritime sector at a suitably senior level. This is in keeping with masters level study at Maritime Colleges and University settings around the world. Additional networking with established RTU research groups is suggested. Finally, the programme documentation describes the wide-ranging requisite learning outcomes quite well, although the provided information is a little disjointed in places. In addition, some details of the achievement criteria (if this is institutionally appropriate) i.e Distinction, Merit, Pass etc. in relation to how the learning outcomes are met, is suggested.
Awarding of the professional master degree in maritime transport to a graduate supposes achievements in the sub-sector of Waterway Transport and Infrastructure within the Transportation Engineering field. During the studies a student has to successfully complete the curriculum and achieve the study main outcome, i.e. the ability to demonstrate in-depth and/or extended

knowledge and understanding the latest achievements in the theory and practice of the maritime transport industry. A significant requirement refers to the theoretical and/or practical novelty of the graduation thesis, which should prove not only the ability of the graduate to apply the theory independently, but also to demonstrate the ability to integrate knowledge from various areas such as ships, maritime and port engineering systems and technologies, environmental management, digitization, management, safety, etc.
The evaluation of all the graduation thesis is significantly influenced by the thesis review conducted by high-level specialists in the relevant field, who assess both the theoretical and practical value of the work. The SAR provides several examples of theses, framed in various connected scientific fields, aimed at sustaining the above statement. Subjects such as underwater noise generated by ships, fuel consumption reduction, automatic monitoring of mooring by using digital devices, ballast water control, fish processing and transport with freeze-drying equipment, personnel management on coast guard patrol vessels etc. may prove the interdisciplinary character of the theses. Aside from that, as a result of the collaboration between the academic advisors and students following the graduation, results sometimes result in papers either published in journals or delivered at conferences. The SAR provides several titles, most of which being rather old (the newest were communicated in 2020).
The SAR claims in Section 3.2.2 at page 146 that every tenth graduate of the programme continues studies in a doctoral programme, including the RTU LMA programme "Maritime Transport" in one of the fields Marine Engineering Systems and Technical Operation or Smart Port Technologies. As stated in the SAR, during the evaluation period four graduates have obtained doctoral degrees. However, no evidence is provided

2.2.3.
Programme Aims and Learning Outcomes
A clear, and generally coherent, structure is presented, and the statements made in the programme descriptors effectively specify the indicative syllabus content and learning outcomes are commensurate with masters level study. This approach should facilitate the development, achievement and assessment of the skills, knowledge and competences achieved during study of the programme. As stated earlier, this suitably flexible programme can be studied on both a part-time (extramural) or a full-time basis. These approaches are to be commended and should maintain a suitable level of student uptake and participation.
(In case of a joint study programme, or in case the study programme is implemented in a foreign language or in the form of distance-learning, analyse in detail the methods used for the implementation of such a study programme).
Foreign Language and Remote Learning Provision
As stated earlier (see section 2.1.2), the programme can be studied on a full-time or part-time basis, both in Latvian and English. It is suggested that some additional details are included in future course documentation to show clearly how part-time extramural study is implemented and managed within the time scales indicated. Going forward details of a more formalised part-time study framework to support these part-time students should be developed. In addition, more formalised details of how the English language programmes will be operationally delivered and assessed is also required.
The programme can be taken either in full-time or in part-time extra-mural mode. Full-time studies allow students to follow an individual plan, as long as they complete the programme within the prescribed period of 1 year and 5 months. Part-time studies are primarily organised in an extra-mural format, but students are also offered the opportunity to participate in full-time face-to-face classes if they wish and have possibilities to do it. They complete the rest of the programme through individual studies, under the supervision of the academic staff. Since the Covid-19 pandemic and still ongoing, the programme also partially implies online teaching as part of the face-to-face education process, where classes are given by using information and communication technologies

without physical presence in the classroom with the instructor. Face-to-face studies, including remote online studies, take place according to the timetable of classes, which is designed in a module-based system. Any course is implemented intensively within a specified period of time and is concluded by an end-of-the-term test and/or an examination. Regular consultations with teaching staff are provided to students according to a certain schedule established before. Consultations are conducted electronically or by phone, using the contact information provided by the LMA of RTU. Collective academic group emails and WhatsApp groups are also available to facilitate the information exchange.
Various forms of study organisation are used in the programme implementation, including lectures, practical classes, seminars, and consultations, including those conducted remotely online, laboratory work, homework reports, study trips, practical training and the graduation theses. During the reporting period, various methods of student and teaching staff collaboration have been employed. Lectures are given in a classic manner, while discussions, workgroups, dialogues, etc., serve as interactive methods. A broader range of research methods is also utilised, such as workshops, scientific and other creative seminars, situation analysis, literature studies, problem-solving tasks, as well as study trips, etc. Several methods are employed to deliver the information to the students, either face-to-face or by making use of computer presentations, handouts, whiteboards, projectors, multimedia, etc.
Examinations and tests, as well as individual or group independent research projects, including study papers, reports, as well as assessment of combined theoretical and practical parts of study courses are used for the final assessment of a study course or its parts in the programme. The study programme ends with the final examination, which comprises the development and defending of a master thesis.
The set of requirements for evaluating study results is set in accordance with the programme’s objectives and tasks, as well as with the objectives and tasks of the courses, which are described in the course syllabus. Examinations evaluate the performance from 1 to 10, except for specific cases specified in the syllabus where a binary scale of "pass" or "fail" is used. The evaluation of study performance comprises various forms of written, practical, and oral assessments individually, as well as combinations of them. Performance assessment is performed by one or several faculty members, except for the practice reports, which are evaluated by an expert group appointed by the programme’s director. The master thesis is evaluated by a state examination committee approved by the Rector of RTU. Based on all those facts above described, it can be concluded that the methods for implementing the programme, including study course organisation and assessment methods are proper.
This is a weak point of the SAR.

2.2.4.
Traineeships
In accordance with Latvian Regulations (Cabinet Regulation No. 305, SAR p.149) the programme must include a period of practice, and use of seminars and other discussion forums. This masters level aspect of the programme is implemented and managed to very good effect. This traineeship can be carried out onshore with shipping companies, port authorities, and terminals, or carried out offshore on various types of seagoing vessels (SAR p.150). The traineeship is supervised and evaluated by both a RTU LMA academic (usually the thesis supervisor) as well as a representative of the traineeship company or organisation where the traineeship took place. The inclusion of such a traineeship is another very good indicator of a strong and innovative masters programme. The implementation in a foreign language and including international students, thus far seems to be quite limited with only one having completed a traineeship.
According to the requirements of the RCM 305, the programme includes a 9 ECTS credits for practical activity aimed at providing the student with the opportunity to enhance the theoretical

knowledge acquired during the classes and develop practical skills and abilities. In the implementation plan of the full-time study programme with the exception of some individual cases the practice is planned for the second and third study semesters and it can also be partially carried out during the summer period.
All the administrative provisions related to the practical activity are internally regulated. There is a trilateral agreement signed by the receiving company, RTU LMA and the trainee. Traineeship programme is clearly specified and the study results to be achieved during the practice are specified. Each trainee is evaluated at the end of the period.
In most of the cases the students find their traineeship placements by themselves with the support of the RTU, but if a student conducts in the master thesis a research on a specific problem of a certain employer the traineeship placement is the employer's organisation/company/specific vessel, including RTU LMA.
Traineeship placements are approved in the second half of the second study semester, taking into account the compliance of the learning outcomes to be achieved during the traineeship with the programme study results planned and achievable. The traineeship of each student is supervised by both the thesis advisor and the representative of the traineeship company/organisation specified in the trilateral agreement. After completing the traineeship, the trainee is evaluated by the traineeship supervisor, then prepares a traineeship report, which is submitted to the Master Programme division at RTU LMA.
The selected traineeship placement, traineeship tasks, and the achieved results, including the connection of these results with the master are discussed and evaluated in dedicated seminars, which also address other issues related to the development of the master thesis.
Starting from the academic year of 2018-2019 5 international students, graduates of the Lithuanian Maritime Academy at Klaipeda have pursued part-time studies, out of which only one of them has completed the traineeship. The process of all organisational, management, evaluation, etc. activities related to the traineeships of international students does not differ from the one for the full-time and part-time studies in the national language.
The fulfilment of each task of the practical training ensures the attainment of at least one corresponding traineeship study result. The student is supposed independently of the practical highlights of the planned research as well as the novelty and significance of the solutions forecasted in solving maritime transport industry problems, which will be approached in his thesis. Each of the traineeship study results is meant to contribute to the attainment of at least one programme result. All tasks of practical training are related to the achievable outcomes of the study programme.

2.2.5.
N/A

2.2.6.
Masters Thesis
The requirement for the development and defence of a master's thesis (SAR p.151), one which is evaluated by a state examination commission, is a recognised strength of the programme. This should provide the culmination capstone to the programme to ensure that a graduating student has met all the requisite learning outcomes and has proven the necessary skills and competences required for the conferment of an advanced degree. The student thesis examples provided in the SAR (pp.152-153), demonstrate a wide range of suitable advanced topics aimed at this level of study. This is to be commended.
The theses are elaborated independently by each student during the 2nd and 3rd semesters, under the supervision of the academic advisor and sometimes with consultants. For each student, a plan of "Development of the Master's Thesis and Related Activities" is created, according to which each student reports periodically the results of his work. Experts appointed by the programme director

evaluate the progress of the performed work. The topics of the theses are usually chosen by students at the beginning of the 2nd semester, based on their own professional interests. The relevance of the master thesis topics to the current and future needs of the industry is ensured through a previous analysis focussed on the main research medium and long-term term trends of the maritime field. Often, the subjects of the theses are either offered or supported by the industry. Appointment of the thesis supervisors, advisors and reviewers is based on their proven experience in the field. Least but not the last, a key point for the study programme development is represented by the assessment of state examinations that quantify the learning outcomes. Scientific consultants from other higher education and research institutions are sometimes invited to help with their expertise at the programme's improvement.
Wrapping up all those mentioned above, one may state that the analysed master programme fulfils most of the quality assurance requirements. Nevertheless, there are some weak points which were described above. A crucially important issue at the European level is the way the learning outcomes are quantified. From this point of view, the programme suffers. The course team should therefore review, and update if required, the current programme documentation to include a clear description of the achievement criteria (grade descriptors) in relation to learning outcomes, and individual course (modules) assessment components.

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:
This programme will provide a suitably advanced study experience, at masters level, for students wishing to build on their undergraduate degree. As discussed earlier, it is not clear how the program meets specific requirements and needs of the maritime sector so will need some strengthening in this respect if it is to do so. Although participant numbers have continued to fall, this new revitalised programme should go some way towards improving recruitment and retention. Feedback obtained from former students and shipping industry employers indicates that this programme develops all of the necessary skills and competences required for continued employment in the maritime sector at a suitably senior management level.

Strengths:
1. The design of this programme as a professional masters level programme is rather strong with many good management structures in place.

Weaknesses:
1. Additional strengthening "professional" elements are required to more fully align this masters programme with the specific needs of maritime sector.
2. The heterogeneous structure of the curriculum.

Assessment of the requirement [5] (applicable only to master's or doctoral study programmes)

1 R5 - The study programme for obtaining a master's or doctoral degree is based on the achievements and findings of the respective field of science or field of artistic creation.

Assessment of compliance: Partially compliant

This programme has been designed to provide a suitably advanced study experience, at masters level, for students wishing to improve their undergraduate understanding, however, the programme has a heterogeneous structure of the curriculum. Additional strengthening "professional" elements are required to more fully align this masters programme with the specific needs of maritime sector.

2.3. Resources and Provision of the Study Programme

Analysis

2.3.1.

The analysis in this section is based on information obtained from the SAR p. 155. - 159, relevant interviews during the onsite visit, as well as information provided by the Registry of Seamen of Maritime Administration of Latvia. The infrastructure of the professional Master`s study programme and atmosphere in the educational institution create a positive impression. During the tour on facilities the experts had an opportunity to check that there are available such common equipment for the implementation of the study programme “Maritime Transport” as projectors and screens, interactive whiteboards, copiers, printers, scanners, portable computers and other multimedia equipment.

During the visit the experts had an opportunity to see different simulators used in the implementation of the study programme. For instance, full mission Bridge Simulator and Liquid Cargo Handling simulator.

In the implementation of the programme, external resources and facilities are occasionally used, particularly in cases where specialised courses are offered by other higher education institutions. For example, the supplementary course "Civil Protection" is conducted at the RTU Institute of Labor and Civil Protection, and the experimental part of the master's thesis "Analysis of Carbon Fiber Composite Shaft Damage in Ship Propulsion Systems" was carried out at the RTU Material Experimental Mechanics Scientific Laboratory. Additionally, research related to master's theses is often carried out in collaboration with interested industry companies/organisations, including ports, terminals, shipping companies, and various environmental institutions. (SAR p. 157)

During the on-site visit experts gathered confirmation that the students and teaching staff have an access to subscribed databases for studying and research purposes, including:

EBSCO: Access to full-text and review databases in the humanities, social sciences, and exact sciences. Collection: National package Academic Search Complete.

EBSCO: INSPEC: Access to full-text database in the exact sciences.

KR - CON:2: Access to a subscription code for a specialised maritime regulatory document database.

International Maritime Organization (IMO): Database of current IMO documents.

As programme-specific resources and provisions, the following additional elements of the informational and material-technical infrastructure, including specialised software and literature could be highlighted (SAR p.156):

- Minitab 16, designed for statistical data analysis and processing.
- Service Model, used for modelling logistics systems.
- QFD Capture Professional, used as a quality management tool.
- SolidWorks, intended for 3D modelling.
- Bluman A.G., Elementary Statistics: A Step by Step Approach, 10th edition, McGrawHill, 2018.
- Scientific writing and dissemination of research results. In the scientific editorship of K. Mārtinsones and A. Piperes. Riga: RSU, 2018, - 301 pp.
- Yvonne N. Bui. How to Write a Master's Thesis. 2nd Edition, University of San Francisco, SAGE, 2014, 315 p., and others.

It is important to mention that RTU Library provides access to previous years' students' theses/projects, methodological materials prepared by RTU LMA teaching staff and the latest navigation publications and textbooks relevant to the study programme.

All necessary study materials, including course descriptions, are uploaded to the study e-platform OMARS. The platform is regularly updated to ensure convenient access to study materials for both teaching staff and students.

According to SAR p.157, the necessary methodological materials for the study programme have been developed and regularly updated. These materials include guidelines for master's thesis

preparation, including the creation of a bibliography, instructions for internships, guidelines for the formatting of study papers, action plans for the implementation of master's theses, guidelines for preparing master's thesis reports, and others.

2.3.2.
N/A

2.3.3.
According to SAR p.158, the funding for the Master's study programme in "Maritime Transport" primarily consists of funding from the state budget, which corresponds to the number of students and serves as the base funding. RTU LMA has a sufficient number of study places funded by the state budget, so the main source of study funding is the state budget funding. The calculation of state budget funding is done annually. In addition, the funding for the study programme in "Maritime Transport" includes:
• Tuition fees (for both full-time on-site and part-time off-site fee-paying students, as well as fees for retaking examinations). The number of fee-paying students is consistently small because the programme has a relatively large number of budget-funded places.
• Performance-based funding (support funding for research activities).
• Funding for the research base.
The funding allocated from the state budget for the implementation of the study programme per student in the Master's study programme in "Maritime Transport" is EUR 4156.79. Since 2015, the number of budget-funded places in the programme remains unchanged at 18 places. In addition to funding from the state basic budget, the study programme in "Maritime Transport" is also financed by revenue from tuition fees paid by individuals or legal entities. This funding is relatively small. The funding from fee-paying students is used for the renewal of material and technical resources, attracting higher-level specialists for ensuring the study process, etc. The tuition fee for full-time studies in the study programme "Maritime Transport" for one student, for example, in the 2022/2023 academic year was EUR 4157.00. (SAR p.158)

Conclusions on this set of criteria, by specifying strengths and weaknesses

Conclusions:
The funding available for the implementation of the study programme is sufficient to ensure achievement of the learning outcomes, namely, financial provision comply with specific features and the conditions for the implementation of the study programme. Study infrastructure, equipment and simulators available for the study programme “Maritime Transport” are modern and correspond to the goals and planned results of the programme.

Strengths:
1. An opportunity to use the scientific infrastructure of RTU, including Scientific Library, for the teaching staff and students of the programme;
2. Good cooperation with companies/organisations of the maritime industry to have access to relevant information and facilities required for research purposes in the framework of master thesis.

Weaknesses:
-

Assessment of the requirement [6]

1 R6 - Compliance of the study provision, science provision (if applicable), informative provision (including library), material and technical provision and financial provision with the conditions for the implementation of the study programme and ensuring the achievement of learning outcomes

Assessment of compliance: Fully compliant

Justification: The funding available for the implementation of the study programme is sufficient to ensure achievement of the learning outcomes, namely, financial provision comply with specific features and the conditions for the implementation of the study programme. Study infrastructure, equipment and simulators available for the study programme “Maritime Transport” are modern and correspond to the goals and planned results of the programme.

2.4. Teaching Staff

Analysis

2.4.1.
Available number of teachers and other personnel ensure delivery of intended learning outcomes in the programme. As said in SAR and confirmed during visit the teaching staff (number, qualification) complies with the requirements specified in Law on Higher Education Institutions. The qualification obtained by the teaching staff involved in the implementation of the study programme "Maritime Transport" complies with the conditions for the implementation of the study programme and the requirements of regulatory enactments. The education obtained for all teachers is practically directly related to the specific field of science, as also they possess the necessary research skills and expertise to provide students with the required learning outcomes within the scope of the conducted courses. At the same time LMA is working to improve the supervision/monitoring measures for maintaining the qualifications of teaching staff, and from 2020/2021 the maintenance/improvement of the qualifications and professional competence of each academic staff during the academic year was planned and evaluated based on the teaching staff's job description and the individual work plan-review of the academic year.
In overall, an important role in the delivery of study courses is devoted to the qualification of the teaching staff of the study courses in the specific field, involving in the study process specialists who are familiar with the achievements and problems of the maritime transport industry, and who manage research and creative processes and methods at a high level. Highly academically or professionally qualified specialists with practical experience, even company managers, are attracted to find out a suitable and competent solution of the chosen problem, for example, in master's theses.
Based on SAR (SAR, Study Programme "Maritime Transport" (47525), 3.4. Teaching Staff, 3.4.1.) the faculty composition consists of approximately 50% RTU LMA academic staff (including several individuals with industry expertise), about 17% industry professionals, approximately 17% faculty members from foreign universities (including two with industry experience in their respective countries), and around 17% faculty members from other Latvian universities.

2.4.2.
During the reporting period, both objectively determined changes and changes directed by the programme management have taken place in the composition of the teaching staff of the programme. Teaching staff seems to be stable for a longer period of time taking into account their competences but considering also quite a high average age. Teachers are enthusiastic, they provide good support for the operation of the Academy. Changes in the composition of the teaching staff involved in the implementation of the study courses of the programme have mainly been caused by the need to replace several teaching staff of the programme and the new/different/additional

requirements set for the professional and academic activities of the teaching staff and their qualifications.
In general, the changes of teaching staff has been insignificant, especially for lecturers, who have conducted practically all the mandatory and restricted elective foundational courses, maintaining a stable quality of pedagogical work and continuously improving it. In the same time there has been relatively significant changes of the teaching staff of the program's elective study courses, reaching within the range of 15% - 33%, thus attracting increased attention of the management of the StP. At the same time, the management of the study programme works on the analysis of changes in the composition of teaching staff and maintains a high level of study quality. The director of the study programme tries to actively cooperate with the teaching staff, willingly listens to suggestions and makes improvements to the study programme.
Efforts dedicated to building staff may be undermined by very small numbers of students. The academy should therefore build a sustainable staff policy combined with conscious recruitment and prevention of students dropout.

2.4.3.
N/A

2.4.4.
Almost all staff, except one, have publications in journals in the last 6 years. In total, 6 lecturers are involved in the work of the study programme. The analysis is based on the staff CV (II - Description of the Study Field - 2.3. Resources and Provision of the Study Field; Annex CV ENGv2.zip), list of publications (II - Description of the Study Field - 2.4. Scientific Research and Artistic Creation; Annex Publications-Patents-Conferences ENG v2.zip) and the curriculum of the study programme (III - Description of the Study Programme - 3.2. The Content of Studies and Implementation Thereof; Annex MAG_JT401_plāns_ENGv2.zip).

2.4.5.
Interviews confirmed that teaching staff collaborate with each other through various mechanisms (informal meetings of teaching staff, departmental meetings, discussions on study outcomes and quality assurance principles, and other events) established by the LMA. Mutual cooperation between employees is also promoted by involvement of faculty members in the development of the curriculum for the study courses, selection, development, and defense of Master's thesis topics and related study activities. Without collaboration with the faculty members, the study programme is promoted also at the national and international levels through joint research conducted within projects and the development of collaborative publications. Additionally, the programme cooperates with foreign members and partner universities.

Conclusions on this set of criteria, by indicating strengths and weaknesses

The qualification of the teaching staff involved in the implementation of the study programme complies with the conditions for the implementation of the study programme and requirements of regulatory enactments. The qualification and research record of the teaching staff is on a good level. There have been no significant changes in the composition of teaching staff during the reporting period. Cooperation between the teaching staff and the director of the study programme is at a good level, which ensures the appropriate flow of information between the director of the study programme and the teaching staff.

Strengths:
1. Experienced teaching staff.

2. Communication is at a good level between the staff and the study programme director.

Weaknesses:
1. Scientific activity in terms of publishing and participation in projects could be higher for some lecturers.
2. Small number of lecturers are involved in the study process, which results in a large number of study courses per lecturer.

Assessment of the requirement [7]

1 R7 - Compliance of the qualification of the academic staff and visiting professors, visiting associate professors, visiting docents, visiting lecturers and visiting assistants with the conditions for the implementation of the study programme and the requirements set out in the respective regulatory enactments.

Assessment of compliance: Fully compliant

The qualification of the teaching staff involved in the implementation of the study programme complies with the conditions for the implementation of the study programme and the requirements of regulatory enactments.

2.5. Assessment of the Compliance

Requirements

1 1 - The study programme complies with the State Academic Education Standard or the Professional Higher Education Standard

Assessment of compliance: Partially compliant

Annex (" MAG_Atb-valsts-izgl-standartam_LVv2.docx") confirms that the study programme complies with Cabinet Regulation No. 305 "Noteikumi par valsts profesionālās augstākās izglītības standartu". Free elective part of the study programme plan should not just consist of a predefined list of courses, but offer the flexibility to take any course as part of the C section.

2 2 - The study programme complies with a valid professional standard or the requirements for the professional qualification (if there is no professional standard required for the relevant occupation) provided if the completion of the study programme leads to a professional qualification (if applicable)

Assessment of compliance: Partially compliant

Extra requested annex ("3_piel_MAG_Sal. ar PS proj-tu_GALA_11.10.24_Kart-1.docx") does indicate compliance with the professional standard of "Maritime transport process manager", however as of assessment visit, the professional standard has not been fully approved.

3 3 - The descriptions of the study courses and the study materials have been prepared in all languages in which the study programme is implemented, and they comply with the requirements set forth in Section 561 , Paragraph two and Section 562 , Paragraph two of the Law on Higher Education Institutions.

Assessment of compliance: Fully compliant

Attached study course descriptions ("LJA-SKA_LV.zip") are prepared in Latvian and English. Descriptions comply with regulations set forth in Law on Higher Education Institutions.

4 4 - The sample of the diploma to be issued for the acquisition of the study programme complies with the procedure according to which state recognised documents of higher education are issued.

Assessment of compliance: Partially compliant

The provided Diploma sample (“ MAG diploms un pielikums_LVv3.zip) partially complies with the procedure by which state-recognised documents of higher education are issued in accordance with Cabinet Regulation No. 202 “Kārtība, kādā izsniedz valsts atzītus augstāko izglītību apliecinošus dokumentus” as provided sample contains only 3rd page of diploma and supplement. Diploma supplement is outdated

5 5 - The academic staff of the academic study programme complies with the requirements set forth in Section 55, Paragraph one, Clause 3 of the Law on Higher Education Institutions.

Assessment of compliance: Not relevant

6 6 - Academic study programmes provided for less than 250 full-time students may be implemented and less than five professors and associated professors of the higher education institution may be involved in the implementation of the mandatory and limited elective part of these study programmes provided that the relevant opinion of the Council for Higher Education has been received in accordance with Section 55, Paragraph two of the Law on Higher Education Institutions.

Assessment of compliance: Not relevant

7 7 - At least five teaching staff members with a doctoral degree are among the academic staff of an academic doctoral study programme, at least three of which are experts approved by the Latvian Science Council in the respective field of science. At least five teaching staff members with a doctoral degree are among the academic staff of a professional doctoral study programme in arts (if applicable).

Assessment of compliance: Not relevant

8 8 - The teaching staff members involved in the implementation of the study programme are proficient in the official language in accordance with the regulations on the level of the official language knowledge and the procedures for testing official language proficiency for performing professional duties and office duties.

Assessment of compliance: Fully compliant

Attached resumes of staff (“CV ENGv2.zip”) and confirmation (“Confirmation - knowledge of the state language.edoc”) verifies that state language proficiency is compliant with Cabinet Regulation No. 733 "Noteikumi par valsts valodas zināšanu apjomu, valsts valodas prasmes pārbaudes kārtību un valsts nodevu par valsts valodas prasmes pārbaudi".

9 9 - The teaching staff members to be involved in the implementation of the study programme have at least B2-level knowledge of a related foreign language, if the study programme or any part thereof is to be implemented in a foreign language (if applicable).

Assessment of compliance: Fully compliant

Attached resumes of staff (“ CV ENGv2.zip”) and confirmation (“Confirmation - knowledge of the foreign language.edocs”) verifies that language proficiency in English is at least B2.

10 10 - The sample of the study agreement complies with the mandatory provisions to be included in the study agreement.

Assessment of compliance: Non-compliant

Sample of attached study agreement (“ Sample_of_study_agreement.zip”) complies with Cabinet Regulation No. 70 "Studiju līgumā obligāti ietveramie noteikumi”.

11 11 - The higher education institution / college has provided confirmation that students will be provided with opportunities to continue their education in another study programme or another higher education institution or college (agreement with another accredited higher education institution or college) if the implementation of the study programme is terminated.

Assessment of compliance: Fully compliant

Attached contracts (“Līgumi par studiju parnemšanu ENG.zip”) confirms that the institution provides the possibility to continue studies within the following option: Klaipeda University master study programme "Shipping and Port Engineering"

12 12 - The higher education institution / college has provided confirmation that students are guaranteed compensation for losses if the study programme is not accredited or the study programme’s license is revoked due to the actions (actions or omissions) of the higher education institution or college and the student does not wish to continue studies in another study programme.

Assessment of compliance: Fully compliant

RTU confirmation (“Confirmation - on compensation for losses.edoc”) states, that students are guaranteed compensation for losses if the study programme is not accredited or the licence of the study programme is revoked due to the actions of the college (actions or failure to act) and the student does not wish to continue the studies in another study programme.

13 13 - The joint study programmes comply with the requirements prescribed in Section 55.(1), Paragraphs one, two, and seven of the Law on Higher Education Institutions (if applicable)

Assessment of compliance: Not relevant

14 14 - Compliance with the requirements specified in other regulatory enactments that apply to the study programme being assessed (if applicable)

Assessment of compliance: Not relevant

Assessment of the requirement [8]

1 R8 - Compliance of the study programme with the requirements set forth in the Law on Higher Education Institutions and other regulatory enactments.

Assessment of compliance: Partially compliant

Study programme generally complies with regulatory enactments. The provided diploma sample is only partial. Diploma supplement is outdated. Free elective parts should provide flexibility for students to take any courses. Professional standard has not been approved yet.

General conclusions about the study programme, indicating the most important strengths and weaknesses of the study programme

The professional master study programme "Maritime Transport" (47525) aims to deliver a professional qualification, though additional technical elements are needed to fully align with STCW standards and reinforce its professional status. Without these changes, renaming the programme as a general “Maritime Transport (Masters)” may be advisable, with the potential to offer two distinct programme tracks to enhance recruitment. Strengths include a robust programme design, excellent development opportunities through RTU's scientific resources, and strong industry connections for student research. However, declining enrollment remains a concern, and improvements are needed in providing part-time study options and in increasing faculty research activity. Additionally, a limited teaching staff results in high course loads for individual instructors. Overall, the programme

benefits from modern infrastructure and solid industry partnerships, positioning it as a viable option for students aiming to advance in the maritime sector at a senior management level.
As documented, and confirmed during the interview, this masters programme provides an effective level of postgraduate study. Concerns have been raised regarding its “professional” nature of the programme and it is requested that the course team consider making suitable changes to strengthen this aspect, particularly if the programme is to be promoted and advertised as a “professional” maritime transport masters. If no strengthening changes are made, then it is further suggested that the programme name be changed to just Maritime Transport (Masters). There is the potential here for two similar programmes to be offered, so increasing student recruitment opportunities. This programme will provide a suitably advanced study experience, at masters level, for students wishing to build on their undergraduate degree. As discussed earlier, it only partially meets STCW requirements for a “professional” masters programme and so will need some strengthening in this respect. Although participant numbers have continued to fall, this new revitalised programme should go some way towards improving recruitment and retention. Feedback obtained from former students and shipping industry employers indicates that this programme develops all of the necessary skills and competences required for continued employment in the maritime sector at a suitably senior management level.
In general, the qualification obtained by the teaching staff involved in the implementation of the study programme complies with the conditions for the implementation of the study programme and requirements of regulatory enactments. The qualification and research record of the teaching staff is of a good standard. There have been no significant changes in the composition of teaching staff during the reporting period. Cooperation mechanism between teaching staff, as well as information flow between StP director and teaching staff are good.

Strengths:
1. An opportunity to use the scientific infrastructure of RTU, including Scientific Library, for the teaching staff and students of the programme;
2. Good cooperation with companies/organisations of the maritime industry to have access to relevant information and facilities required for research purposes in the framework of master thesis.
3. Experienced teaching staff.
4. The design of this programme as an educational masters level programme is rather strong with many good management structures in place.
5. Strong supporting academic and quality assurance framework with excellent further development opportunities as the RTU LMA merger matures.
6. The merger of LMA with RTU has provided excellent opportunities for enriched masters study.

Weaknesses:
1. Scientific activity in terms of publishing and participation in projects could be higher for some lecturers.
2. Small number of lecturers are involved in the study process, which results in a large number of study courses per lecturer.
3. Additional strengthening “professional” elements to fully confirm its “professional” status, and to meet STCW requirements, are required.
4. The intended “professional” nature of the programme. Additional strengthening changes will be required to align the technical areas of the programme with its intended professional focus.
5. Part-time study. A more detailed formalised part-time study framework is required

Evaluation of the study programme "Maritime Transport"

Evaluation of the study programme:

Good

2.6. Recommendations for the Study Programme "Maritime Transport"

Short-term recommendations

1. A new modern student recruitment strategy, one utilising the many social media tools available is required..
2. Ensure that the free elective - C - part provides flexibility for students to take any courses.
3. Provide a full diploma example with an updated supplement.

Long-term recommendations

1. To strengthen the intended “professional” nature of the programme, additional changes are required to align the technical areas of the programme with its intended professional focus.
2. This Navigation Master’s programme could be delivered in two formats. Following strengthening, as a “professional” programme of study or, without strengthening, as an “educational” programme of study.
3. Improve the promoting policy for the programme targeted to the attraction of more potential future students in order to make the master’s programme really efficient from the financial point of view.
4. Director of the study programme should pay attention to the maximum involvement of all staff in various scientific activities (writing publications, participating in projects, etc.) trying to find the potential contribution of each employee.
5. Consideration should also be given to seeking recognition from the International Engineering Alliance (www.ieagreements.org). This is a partnership of international organisations that are signatories to a number of international engineering education accords.
6. The institution must recognise that the IMO has started work on a comprehensive review of the STCW Convention and Code. To facilitate certain aspects of this review the IMO has set up a sub-committee on Human Element, Training and Watchkeeping (HTW). As a consequence of this the course team must implement these aspects, ready for the next review. (See https://www.imo.org/en/MediaCentre/MeetingSummaries/Pages/HTW-Default.aspx.)
7. The SAR must provide factual data to prove the compatibility of the RTULMA quality standards with the ESG provisions of ENQA. A suitable alignment between the two evaluation standards is therefore necessary to be done until the next evaluation.
8. The institution is encouraged to continue the good work they are currently doing to embed the United Nations Sustainable Development Goals and guidance within programmes where this can be done and is appropriate (https://sdgs.un.org/topics/oceans-and-seas). In particular sustainability in programme design and delivery.
9. In the context of best practice RTU LMA should also be seen to be promoting equality, diversity and inclusion in line with applicable national regulatory frameworks, as well as embedding inclusive design within the curriculum where this is relevant and appropriate.

III - Assessment of the Requirements for the Study Field and the

Relevant Study Programmes

III - Assessment of the Requirements for the Study Field and the Relevant Study Programmes

Assessment of the Requirements for the Study Field

Requirements	Requirement Evaluation			Comment
R1 - Pursuant to Section 5, Paragraph 2.1 of the Law on Higher Education Institutions, the higher education institution/ college shall ensure continuous improvement, development, and efficient performance of the study field whilst implementing its internal quality assurance system:		Partially compliant		R1 - Pursuant to Section 5, Paragraph 2.1 of the Law on Higher Education Institutions, the higher education institution/ college shall ensure continuous improvement, development, and efficient performance of the study field whilst implementing its internal quality assurance system: Justification: RTU LMA has implemented policies and procedures to ensure the quality of higher education. However, there are challenges with the consistent collection and application of student feedback.
R2 - Compliance of scientific research and artistic creation with the level of development of scientific research and artistic creation (if applicable)	Fully compliant			Justification: RTU LMA has sufficient scientific and technical potential for successful further development of the given directions.

Requirements	Requirement Evaluation			Comment
R3 - The cooperation implemented within the study field with various Latvian and foreign organizations ensures the achievement of the aims of the study field.	Fully compliant			Justification: The overarching design of all programmes and the intended future programme development initiatives are well thought out and are fully consistent with the stated aims of the merged institutions, and the professional bodies concerned. The compulsory professional STCW safety and firefighting courses available are an excellent resource for further international cooperation activities. They are also a good indicator of a strong professional programme. In addition, and as detailed in other parts of this review, the use of returning experienced seafaring alumni, with recent up-to-date industry knowledge, to teach current students is beneficial to the students professional development. It should also help to promote, and develop, the merged institutions reputation on the international stage.
R4 - Elimination of deficiencies and shortcomings identified in the previous assessment of the study field, if any, or implementation of the recommendations provided.	Fully compliant			Justification: The full merger of RTU with LMA has been implemented and the majority of the deficiencies highlighted previously have now been corrected. The merged institution maintains a fully effective certified quality management system compliant with ISO 9001. This strengthening of programme quality assurance processes, together with industry acceptance of the delivery of the professional aspects of the programmes, and the developing international recognition of programmes, will ensure their robust continuity in the future.

Assessment of the Requirements for the Relevant Study Programmes of the Study Field

No.	Study programme	R5	R6	R7	R8	Evaluation of the study programme (excellent, good, average, poor)
1	Navigation (41525)	Not relevant	Fully compliant	Fully compliant	Partially compliant	Good
2	Maritime Transport - Marine Electrical Automation (42525)	Not relevant	Fully compliant	Fully compliant	Partially compliant	Good
3	Maritime Transport - Marine Engineering (42525)	Not relevant	Fully compliant	Fully compliant	Partially compliant	Good
4	Maritime Transport - Navigation (42525)	Not relevant	Fully compliant	Fully compliant	Partially compliant	Good
5	Navigation (44525)	Not relevant	Fully compliant	Fully compliant	Partially compliant	Good
6	Maritime Transport (47525)	Partially compliant	Fully compliant	Fully compliant	Partially compliant	Good

The Dissenting Opinions of the Experts

None