

# Expert group joint opinion

Evaluation Procedure: Assessment of Study Field

Higher Education Institution: Novikontas Maritime College

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 report includes the assessment of the study field “Seafaring” implemented by the Novikontas Maritime College (hereinafter - NMC) and two programmes: first level higher professional education study programme “Maritime Transport” and first level higher professional education study programme “Marine Engineer”. The mission of the study field “Seafaring” is to develop highly skilled professionals that can be part of the team on the vessels for various purposes and specialties which is done with the help of professionally advanced and well-known lecturers and practitioners of the field. Taking into account the specific nature of the maritime sector, it is evident that the Maritime education differs significantly from other study fields. In this respect, the allocation and accreditation of maritime programs in the study field “Seafaring” ensures an objective and unified approach to the implementation and evaluation of Maritime programs at both national and international levels. During the onsite visit and basing on the information provided within the Self-assessment report (hereinafter - SAR) the experts obtained all relevant evidence regarding compliance of NMC with the assessment criteria of the study field “Seafaring”. It was confirmed that aims of the study field are clearly defined and attainable. The SWOT analysis and the relevant development plans are elaborated, to provide the systemic approach to the overall management of the study field.

Taking into account the needs of the society, employers and the field, the NMC has managed to work on the needs and demands of all of these groups in order to provide the well-developed base of knowledge for the purpose of the entrance of the labor market. Compared to other higher education institutions that provide education in related fields, NMC stands out with its high level of concentration to the practical skill set that is taught and provided to their students that is acknowledged by the employers.

The college has been working on establishment of cooperation both at national and international levels to fulfill objectives of the study field: 1) to provide internationally competitive education in seafaring and to train highly qualified specialists that are ready to compete in the labor market; 2) to become one of the leading institutions to provide best set of knowledge in the field with advanced equipment and tools to work on practical skill set of the students.

NMC can be proud of its advanced training center including a safety course simulator room which consists of a swimming pool with weather simulation and various environments - storms, rain, day/night.

The academic staff try to be involved in different research and also having publications. However, not all of the lecturers have publications. This could be related to the fact that some lecturers are practitioners and are working in the field or the fact that a precondition of having such research activity is not a mandatory prerequisite of college level lecturers.

Objectives of the study field clearly states internationalization as one of the important aspects but at the same time several challenges related to students’ mobility were identified and have to be worked on in the future. The same regards attraction of foreign guest lecturers.

Overall, the NMC has developed a good infrastructure which regards digital platforms and their accessibility. The staff of the college are understanding and try to adapt to the conditions which have an effect on the studies of students because of their work or internship at the sea and limited access to studies or involvement in study process. It can be stated that students, staff, branch managers have strong mutual understanding and cooperation. Meetings with above mentioned

stakeholders gave an impression of good cooperation networks and supportive environment.

The aim of programs implemented by the NMC is to prepare ship's deck and engine officers in accordance with the relevant requirements of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers Convention (hereinafter - STCW Convention) and other binding regulatory enactments. Also it is important to highlight that the Law "On Regulated Professions and Recognition of Professional Qualifications" stipulates that for regulated professions in the maritime field, compliance with the requirements of the STCW Convention is a prerequisite for a person to be entitled to pursue a professional activity in the maritime field. Both study programmes "Maritime Transport" and "Marine engineer" are approved by the Registry of Seamen of the Maritime Administration of Latvia (hereinafter - Registry of Seamen) and certified by the Ministry of Transport as well. Each of the programmes have its strengths and challenges which are in depth analyzed further in the Joint Report.

## **I - Assessment of the Study Field**

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#### **1.1 Management of the Study Field**

##### **Analysis**

1.1.1. During the onsite visit and basing on the information provided within the SAR the experts obtained all relevant evidence regarding compliance of NMC with the assessment criteria of the study field. It was confirmed that aims of the study field are clearly defined and attainable, namely, to prepare competitive, qualified and responsible professionals, who are able successfully enter in the labor market and are oriented towards further education. It fully complies with the Strategy for the period 2021 – 2027 of the NMC, as well as with mission and vision of the College, which were defined taking into account the needs of society, employers and economical aspects.

The interconnection of the study programmes included in the study field is clear, namely both programmes "Maritime Transport" and "Marine Engineer" leads to the professional qualifications in the maritime sector. The graduates of programmes are successfully employed as deck and engine officers onboard the vessels of the merchant fleet. According to the data obtained from the Maritime administration of Latvia (hereinafter - MAL) around 95% of all NMC graduates continue to work in the maritime industry. During the study process all students are employed onboard the ships in a capacity deck or engine rating.

1.1.2. The SWOT analysis identifying the strengths, weaknesses, opportunities and threats of the study field is carried out and the relevant development plans are elaborated (SAR pp. 11-13). For instance, the Development Plan of the Study Field "Seafaring" was drawn up according to factual needs of NMC and covers the most of the aspects relevant to the study direction: increasing the number of students; improvement of the study program; development of the academic staff; improvement of material and technical provisions; development of stable cooperation with external organizations.

1.1.3. NMC implements one study field and two study programmes. During the on-site visit it was verified that the director of the Study programmes (there is one director for both study programmes) and the head of the study department are responsible for the implementation of the Study Field. According to SAR (p.14) all resolutions about what to change in the field of study/study programmes are approved by the Council, which consists of the director, deputy director, academic, administrative, general staff, representatives of employers and students' self-government. All

financial resolutions are made by the Founder. All experts have the common opinion that the management structure of the study field and two study programmes is not complicated and is transparent. The communication between the NMC administration, students and academic staff is done in an effective way. The study platform NOVIS is used as an efficient tool which provides communication regardless whether the students are onboard the ship or ashore. The main prerequisite for effective communication is that the management staff are former seafarers and they are professionals in the field. Nevertheless it is important to highlight that during the onsite visit experts noticed that the director of both study programs can hardly answer the enhanced questions regarding organizational aspects of the study programme "Marine engineer". Experts got the impression that it is a very huge workload for one person to be in charge of both study programs (Marine engineer and Maritime Transport) and also of the whole study field.

1.1.4. The NMC requirements for the admission of students have been developed in accordance with the Law on Higher Education Institutions and the Cabinet Regulations No. 846 "Regulations Regarding the Requirements, Criteria and Procedures for Admission to Study Programmes". It was verified that the NMC Admission Requirements are approved by the Council every year by November 1st and are published on the NMC website. Admission to the College is year-round without additional entrance examinations, taking into account the applicant's final marks in certain subjects, the applicant's seagoing experience and the result of the Marlins (maritime English) test, which must be more than 60%. Seagoing experience for at least 12 months (does not apply to the graduates of Marine schools) and the Marlins test must be provided by part-time studies` applicants. NMC also provides to applicants consultations on career opportunities in the maritime sector before applying for studies. According to SAR (pp.15,16) recognition of the study results, professional experience, and previous formal and non-formal education is implemented in accordance with NMC Regulations on the Procedure for Recognition of Competencies developed outside formal education or from professional experience and learning outcomes achieved in previous education.

1.1.5. According to SAR (pp.17,18) an assessment of students' achievements is being implemented in accordance with the NMC "Study Regulations". In order to assess whether the assessment of the study result is understandable for the students, each study course has a survey on the implementation of the course. If a low grade is marked in a particular course, the study director clarifies with a lecturer what was not precise and clear to make improvements in the assessment system. In light of the above, the methods, principles and procedures for assessing achievements of students have been developed and are clearly defined.

1.1.6. NMC declares that it is the duty of the academic staff to inform the director of study programmes about cases of plagiarism with evidence that plagiarism has occurred. NMC uses the common user platform to check the qualification works: <https://my.plag.lv>. If plagiarism is detected in a student's work, the student has to re-pass the debt (SAR p.19).

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

Taking into account the information obtained during the onsite visit and the information provided within the SAR it is possible to conclude that the management of the study field at the NMC is well organized and complies with the relevant accreditation criteria. The SWOT analysis and the relevant development plans are elaborated, to provide the systemic approach to the overall management of the study field. A system has been set up and procedures developed for the admission of students. Also the procedures for assessing achievements of students have been developed and assessment criteria are clearly defined.

Strengths:

1. The management staff of NMC are former seafarers and they are professionals in the field, which is an important prerequisite for effective and democratic communication between the NMC administration, students and academic staff. Also digital study system NOVIS plays an important role to ensure effective communication;
2. All NMC students are already employed during their studies;
3. More than 95% of all NMC graduates continue to work in the maritime industry.

Weaknesses:

1. Too high workload for the director of both study programs and field in one person.

## **1.2. Efficiency of the Internal Quality Assurance System**

### **Analysis**

1.2.1. The NMC quality policy is formulated in relevant legislation and the College's internal regulations. The rules of conduct are included in the NMC Strategy. As a part of the Strategy, objectives have been adopted in which the quality policy has been included. The College has adopted quality standards compliant with ISO-9001 and implemented Quality Management System (hereinafter - QMS). QMS is compliant with Regulation I/8 "Quality Standards" of the STCW Convention. The QMS forms a specific quality book in which 10 pro-quality procedures are included. The QMS describes in detail all components of the College management process, the educational process and the mechanisms for assessing its quality. The system provides a good basis for building a quality culture. The system is publicly available on NMC webpage <https://novikontas.lv>. The system has been continuously improved, subject to regular reviews with the participation of external and internal stakeholders.

1.2.2. A systematic evaluation of the study programs are conducted. The implementation is carried out by collecting information on the courses of the educational process, which is obtained from the teachers and the conclusions resulting from the implementation of the relevant QMS procedures. The QMS procedure "Development, monitoring and regular audits of Study Programmes" enforces regular monitoring of the education process and its improvement. From the analysis of the documentation and interviews with internal stakeholders (management, teachers, students) it appears that internal audits are carried out (study director is responsible for their implementation), each subject is checked (once every 3 years), each subject is evaluated by students upon completion. There is also a systematic monitoring of classes (hospitalization) according to the procedure set out in the QMS. Importantly, remote class monitoring was additionally conducted during the Covid-19 pandemic conditions. At the same time, the College was prepared for the situation of conducting classes remotely as it had already used the e-learning platform (content and courses are prepared in English).

In the assessment of the quality of education at the College, it is planned to involve external stakeholders, in particular employers, who would be able to submit their postulates, for example concerning the adjustment of education to the expectations of the labour market.

In the questionnaire employers will have the possibility to leave comments on students' readiness for work at sea and proposals for the improvement of study programmes. It is planned that surveys will be sent to employers twice a year.

For this, graduates are included in the evaluation. After each graduation, NMC sends electronic questionnaires for graduates in order to receive an overall assessment of the study programmes. Graduates' comments and evaluations are taken into account in the improvement of study

programs.

Thus, in terms of reviewing the study programmes, College is taking good steps. However, a real involvement of employers is required, as fulfilling only the requirements of the STCW Convention is not sufficient. Some of the students will continue education on further academic levels, some of them may work ashore in the future and their needs shall be well identified.

Taking into account the relatively small number of programmes implemented, the experts are in opinion that it is necessary to consider expanding the range of educational programmes offered. The experts could suggest considering the possibility of providing 5. LKI level program "Ship's Electro-automation specialist" and the following further education programmes: "Deck officer on ships of less than 500 GT", "Engineer on ships of less than 750 kW" and "Master on ships of less than 50 GT". This would expand the range of programs at the NMC and provide opportunities of education for a wider profile of maritime professionals.

1.2.3. The process for students to submit complaints and suggestions is governed by the QMS procedure. "Procedure for submission and review of students' proposals and complaints;" which determines how students can submit proposals or complaints to the management. Proposals or complaints can be submitted individually or by groups of students, regardless of the study programme or form of study. Proposals and complaints shall be submitted to the Head of the Study Department. However new solutions in that area are planned to come. The future procedure determines exactly when submissions should be made and what range of submissions may be included, in particular:

- on the content and quality of studies,
- about the academic calendar,
- on the documents regulating the studies and organizational issues,
- about the study organization,
- on the improvement of the quality of the study programme.

It seems to be a good practice to regulate the catalog of applications because it gives an indication to the students what they can come with. It is also a good situation to indicate specific recipients in the College of submissions. On the other hand, students should be able to report any problem or request, e.g. discriminatory issues. It is therefore not understandable to restrict the students' freedom in this area.

1.2.4. Students and alumni are involved in surveys of study programs. It is planned to involve employers. Academic teachers due to their small number express their opinions in direct form (oral). It seems that at this stage the College is preparing for a broader research (from 2021/2022). It has planned to collect specific quantitative data for this purpose. It has also defined a detailed mechanism for collecting statistical data, it includes:

1. Students
2. Management of the Study Field
3. Graduates
4. Graduates career tracking.

The College has no tradition of building statistical data on study programs, however it seems that surveying the students is College longest practice. It is at the stage of building and implementing the first solutions. This work should be continued.

1.2.5. Public access to information is provided through the College website, which is updated on a regular basis. The website is available in Latvian and English languages. Information about the College and programs; their form of presentation is clear and the information appears to be. Those

who are interested can easily access it, without the limitations of space, time, or hardware and software. Among the published information are those for college applicants, students, as well as other interested audiences. The College's website provides information about majors offered, admission requirements, career opportunities, and current events, among other things. The College has specific internal responsibilities for managing and updating the website.

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

The college has established a policy and procedures for assuring the quality of higher education. Novikontas Maritime College has implemented suitable tools and mechanisms, which enable identification of weaknesses in the education process and undertaking improvement activities. At the College level, bodies responsible for substantive, organizational and administrative supervision over ensuring and improving the quality of education have been appointed. Monitoring and systematic improvement of the quality of education and promotion of quality culture at the College are reflected in its mission and strategy. Pro-quality activities resulting from the mission and strategy of the College are implemented through the introduction of Quality Management System. The functioning of the system is based on the involvement of internal stakeholders. Participation of external stakeholders like employers shall still be developed. The process for students to submit complaints and suggestions is formally introduced. Information about the study process and quality system are publically accessible.

#### **Strengths:**

1. Inclusion of the quality aspects in the College Strategy.
2. Developed Quality Management System.

#### **Weaknesses:**

1. Insignificant participation of external stakeholders i.e. employers and graduates in the educational quality assurance system.
2. Focusing on STCW requirements when graduates may choose a broader career path. This aspect should be taken into account in Quality Policy.
3. Students should have free and unrestricted access to complaints and suggestions procedure.

### **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

The college ensures continuous improvement, development, and efficient performance of the study field, implementing its internal quality assurance system, however involvement of external stakeholders (employers) are to be intensified.

- 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

The college has established a policy and procedures for assuring the quality of higher education. Thus the comprehensive approach to the quality aspects of the study process is ensured.

- 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

The procedures (documentation) of QMS implemented by the college ensure a mechanism for the approval, internal supervision and periodic inspections of the study programmes.

- 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

During the accreditation process the relevant evidence was obtained that the criteria, conditions, and procedures for the evaluation of students' results are developed and published.

- 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

The relevant evidence was obtained that an internal procedures and mechanisms for assuring the qualifications of the academic staff and the work quality have been developed by NMC.

- 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

The participation of external stakeholders, e.g. employers, social environment and alumni, in the education quality assurance system is insignificant. Also the college has no tradition of building comprehensive statistical data on the study programmes.

- 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

The college ensures continuous improvement, development, and efficient performance of the study field, implementing its quality assurance systems.

### **1.3. Resources and Provision of the Study Field**

#### **Analysis**

1.3.1. According to SAR (pp.26-32) NMC as a private college is financed by its founder in accordance with the minimum cost per student/educational programme set by the Cabinet of Ministers. In addition to the study process, the college may provide paid services, perform economic activities and provide other services in accordance with the basic directions of its activities and regulatory enactments. The largest part of NMC's income is made up of short training courses for active seafarers. These financial resources are also used for the development of study field, programmes, infrastructure and facilities. Tuition fee for students is relatively low.

The special system for funding scientific and applied research is not established, and is not reasonable. NMC is mostly focused on methodological and study materials development, in some cases using that projects' sources.

The participation of teaching staff in scientific conferences and applied research should be

enhanced, including planning and stimulating it from the budget of the college.

1.3.2. The layout, equipment and atmosphere of the educational institution create a positive impression. It is indicated in the SAR (p.33) that NMC has a premises of 2879 m<sup>2</sup>, including 24 classrooms, 19 laboratories (simulators) with 12 workplaces and 3 administrative rooms. All NMC classrooms are connected to the intranet network, as well as internet access is provided both for students and teaching staff. It is important to highlight that the modern ships` simulators and simulation equipment are available for the practical training of students of both programs "Marine engineer" and "Maritime Transport". The use of such simulators in the educational process is very important, as they can be used to simulate various practical situations in ship`s navigation, as well as in the operation of ship`s machinery.

From the SAR (pp.33-34) comes out and during the on-site visit it was verified the following technical equipment that is needed to ensure the study process is available at NMC: TRANSAS ERS 5000 simulators - engine room simulator with 7 engine control rooms; L3 - liquid cargo handling simulator; TRANSAS simulators - navigation bridges with Dynamic Positioning module; the rescue boat (3.8 to 8.5 meters long, equipped with an outboard engine and a complete set of oars, complies with the requirements of section V, paragraph 5.1, of the LSA Code); inflatable life-raft in a container with a hydrostatic launcher; life raft and launching crane; life jackets, wetsuits, thermal protection aids for trainees and instructors; 2 - channel VHF portable life-saving appliances; the pyrotechnic kit available in the lifeboat; 406 MHz emergency position indicating radio buoy EPIRB (mock-up); 9 GHz search and rescue radar transponder SART (layout); a full set of lifeboat equipment; a full set of life raft equipment; human-sized mannequins for resuscitation exercises; first aid kits; breathing apparatus; Neil-Robertson stretcher etc.).

The following laboratories and special training facilities were available at NMC:

- Safety course simulator room (swimming pool with weather simulation);
- Fire fighting facilities;
- Welding Laboratory with associated ;
- OWS laboratory;
- Electrical and Hydraulic Laboratory;
- High Voltage Laboratory.

However, an area where attention should be paid is that not all relevant equipment for the practical part of the study program "Marine engineer" is available at NMC premises. For instance, laboratories for the control systems and pneumatics. This is especially important for full time students. It is important to mention, that on the basis of cooperation agreements NMC students have the opportunity to use RTU Olaine College`s of Technology and Riga Technical College`s (RTK) resources for the studies, including the library, as well as NMC is allowed to have practical classes at Freeport of Riga`s territory, namely use of the icebreaker "Varma" for educational and training purposes. During the on-site visit it was verified that the study infrastructure, resources and facilities are available for the implementation of the study field. Also the procedures are established for the improvement and purchase of material, methodological, informative, etc. provision. An interview with the teaching staff and programmes` director provided the necessary evidence that procedures established by the college for maintaining and improving study facilities and provision are working in real life.

1.3.3. According to the information provided within SAR (p.34) NMC has signed a cooperation agreement with Riga Technical College (RTK) that the students are allowed to use RTK resources, including the library. It was observed that the most of the informative materials required for

professional study courses are obtained by students from digital resources, including the system NOVIS.

NMC has a very simple procedure for the improvement and purchase of methodological and informative provision, namely, the director of study programmes has direct access to the highest management of College to request funding and purchase necessary teaching aids. In general the library resources, methodological and informative provision available to students and teaching staff meet the needs of the study field.

Nevertheless experts believe that the College, including both teachers and students, also needs online access to the platforms of International Maritime Law in order to have the latest versions of those documents.

1.3.4. During the on-site visit it was verified that students of NMC have the opportunity to use the e-study platform "Novis". "Novis" provides an excellent opportunity to receive all relevant information needed for studies (for instance: study course descriptions, presentations, textbooks, informative materials etc.). "Novis" allows to follow the progress of students' studies, looking continuously at the students' success, their activity in taking study courses, and fulfilling independent tasks.

1.3.5. In accordance with the "Novikontas Maritime College Regulations," persons in academic and administrative positions are elected through an open competition in accordance with the "Regulation on academic staff election" and procedure "Staff resources", which sets requirements for candidates and describes the procedure for electing candidates. The attraction of teaching staff is done strongly in line with the requirements described in the procedure "Staff resources" to ensure that only appropriately qualified persons with the relevant experience may be involved.

1.3.6. Experts were informed that the procedure for ensuring the quality of work of the academic staff is under revision. In order to assess the effectiveness of teaching personnel, NMC has introduced the several tools, namely: monthly training meetings attended by department heads, teaching staff and management representatives; regular collection and analysis of student feedbacks; annual management review meeting; individual assessment of teachers twice a year, based on student surveys; regular audits of the study process.

1.3.7. Taking into account information provided within the SAR (p.38), it was verified that 24 persons of academic staff are involved in the implementation of the study field "Seafaring". 10 persons provide general education study courses, but 14 - are specialists in the professional field. The workload of the academic staff includes the development and updating study courses, providing lectures, consultations, exams and tests organizing, as well as research work and participation in the projects of NMC. Overall workload of the academic staff is balanced to ensure the quality of the study process.

1.3.8. Interviews with students confirmed that students regularly have access to tutors and programs' director if necessary to receive consultations and all necessary support. Students are provided with individual support from the directors of study programmes and the head of the study department. The directors of the study programmes and the head of the study department are always available for the students to discuss the progress of the students' studies, productivity, motivation or reasons for lack of motivation. All information about the study field, study programs, contacts of the teaching staff and administrative staff, study course materials, tasks, procedures, rules and regulations are available for students in the "Novis" platform. It is important to highlight that at the first day of the studies, a meeting with the director of the study programme is organized for the students with the aim to acquaint the student with the "Novis" platform and NMC study

environment.

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

Resources and Provision of the Study Field 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 and wide range of simulators are the strengths of the NMC. When it comes to specific equipment required for the implementation of the study programme "Marine engineer", there is still room for slight improvements regarding the equipment for practical training.

Strengths:

1. Simulators, equipment used in the study process;
2. Infrastructure and facilities for short training courses;
3. E-study platform "Novis" – ensures the efficient process of distance learning.

Weaknesses:

1. The NMC doesn't have online access to the platforms of International Maritime Law in order to have the latest versions of those documents;
2. Not all relevant equipment for the practical part of the study program "Marine engineer" is available at NMC premises. Nevertheless this is compensated by unlimited use of the icebreaker "Varma" for educational and training purposes.

### **1.4. Scientific Research and Artistic Creation**

#### **Analysis**

1.4.1. Analyzing information provided within the SAR (pp. 39-40, 44), an expert group concludes that the directions of NMC's applied research in general correspond to the development goals of the College and are relevant for the study field and industry. The interests of the College in applied research are directed towards the developments of the maritime industry technologies, new and improved methods of communication, applying in the maritime industry and psychological evaluation of human sources of the maritime industry, paying special attention to the industry's seagoing staff.

1.4.2. During the onsite visit and basing on the information provided within the SAR, expert group concludes, that provided applied research and the outcomes are integrated in the study process of the study programmes, directly involving teaching staff in provided research. For example teaching staff was involved in "Modeling of the Liepāja Port Navigation Channel on a Simulator" performed in 2017 or in the psychological evaluation of seafarers based on the data on the mental health and well-being of seafarers, as well as accidents at sea, provided in cooperation with CleverPoint Marine in 2021. The connection the college provided applied research with the study process is logical and justified. Currently, research results that coincide with the content of the study courses are used to inform students about the innovations. In order to improve the connection of scientific research with the study process, NMC is going to define the description of the process of using research outcomes in the study process in new regulations that will regulate the scientific research. Experts also noted that purchasing and using a specialized navigational channel modeling tool, such as the Wizard, is advisable for further applying research in modeling of port channels development.

1.4.3. Regarding international cooperation in the field of NMC's applied research, experts note that NMC has established a close network with international educational institutions and training centers,

there is regular communication and exchange mobilities, in order to increase the competence and knowledge that provides opportunities to use innovation at work. NMC is an active member of the International Association of Safety and Survival Training (IASST), which is working to improve safety and rescue training, which is also one of the primary areas of maritime education. The organization has 148 active seafarers' education and training institutions from 50 different countries, covering all continents. Thus, NMC's involvement in global maritime training processes is significant, and it is possible to implement this knowledge and innovation in its educational process. NMC representatives have actively participated in IASST events and in different international conferences.

1.4.4. Regarding involvement of the teaching staff involvement in applied research, experts note, that NMC academic staff and students have wide opportunities to participate in local and international projects, attend both international and Latvian conferences. NMC teachers integrate the latest conference results into the content of study courses. NMC presented a number of measures to involve teachers in research, such as internal communication about such activities, offering of materials and financial resources for the implementation of research, reviewing of a remuneration and responsibilities of the teaching staff, involved in research activities and other. Experts also noted that the majority of teachers have good professional experience, but not all teachers are involved in research and only a few of them have publications.

1.4.5. NMC is an active member of the International Association of Safety and Survival Training, promoting participation of teaching staff and students in numerous events of the association, thus providing students with access to current knowledge and applied research actualities in the field of modern marine technology. The obtained knowledge with the applied research elements is used during practical application tasks working with NMC's electronic simulators in study programmes of all levels. NMC students are involved in applied research in the field of psychological well-being and self-regulation through assignments in sailing practice, which is also important for their further careers at sea. NMC students participate in national events, such as an Innovation Competition organized by the Latvian Maritime Education and Research Development Fund. Qualification work is classified by NMC as a kind of research work, compulsory for each student.

1.4.6. During the onsite visit and basing on the information provided within the SAR (pp. 46, 74, 102-103), the expert group concludes that NMC demonstrated excellent initiatives and results in the field of development of innovative solutions and applying in the study field, making a significant positive impact on the study process. NMC developed a very modern and impressive Safety and rescue simulator on water, one of the best in Europe. NMC renovated, modernized and implemented a full range of specialized electronic simulators, such as ECDIS, ARPA, a set of Navigational bridges with visualization, Engine room simulators, water treatment and other innovative equipment. NMC constructed a unique Water boiler model with an acting control system. NMC recently purchased an innovative technology - a set of virtual reality goggles equipped with biometric sensors and a program that measures the human brain and heart rate. This equipment has a good potential to be used providing applied scientific research.

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

The Scientific Research could be evaluated as fully compliant with the College and the study field by providing a justification, based on the information obtained during the onsite visit and based on the information provided within the SAR.

Strengths:

1. Impressive NMC's initiatives and results in the field of development of innovative solutions and

applying of them in the study field, making a significant positive impact on the study process;  
2. Wide international cooperation in the field of NMC's applied research using membership in the International Association of Safety and Survival Training and other possibilities.

Weaknesses:

1. The majority of teachers have good professional experience, but not all of them are getting benefits from applied scientific research and only a few have publications.

## **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

The applied research could be evaluated as fully compliant with the College and the study field.

## **1.5. Cooperation and Internationalisation**

### **Analysis**

1.5.1. During the onsite expert group visit and basing on the information provided within the SAR, expert group concludes that the Novikontas Maritime College cooperates with various different higher education institutions, organizations, and employers in Latvia. To be more specific, according to SAR p. 48, NMC has close cooperation with various higher education institutions for seminars, workshops or projects such as Maritime Academy of Latvia which was also mentioned various times during onsite visits as one of the main cooperation partner institutions as well as Liepaja Marine College. As both of these institutions also provide maritime education they are interested to cooperate for reasons of education improvement in the studies, regarding student research as well as internships which is a crucial part of the maritime education. In NMC practical skills is the key component of the study process.

During an onsite meeting with academic staff of the NMC, an expert group identified the close cooperation with Mechanics and Technology College of Olaine which supports NMC with access to laboratories where various research is made for the purpose of improvement of studies, new skill development.

NMC is also active in cooperation with other institutions as CleverPoint Marine which provides assessment assistance of psychological readiness and capabilities of the seafaring students in the NMC. The technologies provided by the CleverPoint Marine provides the college opportunity to assess these factors with the help of virtual reality technology and biometric sensors.

As the NMC bases its education largely on practical skill gaining, early entrance of the seafaring students into the labor market, it is a very important aspect that they have close cooperation with employers and institutions that employ seafarers. It can be stated that during the meeting with employers, representatives were open and made truly a great impression of the connection and consistent cooperation they have with the college. NMC takes into consideration the advice given by the employers and thus the employers are interested to collaborate and employ their students in the internship period and also when they graduate and finish their studies at NMC. Such representatives of employers include Transport and Telecommunication Institute, CSM Baltija, BGI, TB Marine shipmanagement, Interorient and other employers. It has to be noted that employers were speaking greatly about NMC students, their skills and devotion compared to their experience of other graduates of various institutions. Their performances are not comparable and they wish that this

college will maintain their cooperation in the long-term. They also stressed that they truly expect that NMC as a private institution will not be merged with RTU or any other institution as the specificity of maritime education cannot be understood and generalized. If they get merged, it will lower the quality of future seafarers which is a large concern for employers currently.

The cooperation partners are selected in view of the specific features of the study field and the relevant study programmes as the institutions, organizations and companies they cooperate greatly benefit and improve the study process and quality, thus it benefits to the overall study experience of the students of NMC.

NMC goals of cooperation in the study field are indicated in SAR p.49. Each cooperation has to comply with their goal to provide quality studies and research, maintain and build excellent communication and partnership with foreign and local institutions, follow and update their technological and pedagogical approaches and tools according to the market tendencies. The information provided in the SAR complies with the actual situation as the NMC constantly modernizes its equipment, has advanced resources and digital technologies which impressed the experts team. It was outstanding.

1.5.2. During the visit experts found out that NMC is trying to be active also in cooperation with institutions and organizations abroad, although in the eyes of experts this aspect should be improved more due to student inactivity. The cooperation partners are selected in view of the specific features of the study field and the relevant study programmes. The NMC is a college that is centered on practical skills and preparation of the new seafarers on board in real life; thus, the main basis of their cooperation abroad is with foreign employers, internship providers in the international market. This cooperation is being provided through ERASMUS+ project partnership with EU funding. The major cooperation partners as mentioned within the SAR p. 50 of the NMC are Knutsen (Norway), Matrix Shipmanagement (Cyprus), StenaLine (Denmark / Latvia), Norbulk Shipping (UK), Utkilen (Norway).

During the meeting with employers, an expert group found that employers highly value if students/graduates are involved or have been a part of such a mobility programme. Although, they did mention that it is not the main priority as the students are well - prepared within the NMC itself and the good students are employed after their first internship after they show their skills and overall performance on the board. When asking current students of their interest or goals regarding involvement in such exchanges, they personally shared that they do not see a point to do so really as they do the theoretical courses while already being on board working in the internship which is a part of their studies and takes quite some time. If they like the team on the ship, their employers, they do not see a reason to go on such mobilities if they are employed, earning income and are satisfied with everything in the work they are doing and the environment there. Of course, it is a great opportunity and that is necessary for the NMC and overall cooperation of the college and relation promoting with other institutions, but students do not seem interested nor see the necessity in that. It has to be noted that the employers cooperate very closely with the NMC in preparation of the specialists as well as they are ready to pay according salaries for their work. Locally, it is a truly well - based system of connections and employment which ensures that all of the students are employed before their graduation from the NMC. Thus, it is a reasonable justification in the eyes of the expert team why very low level of students use the opportunity of training/internship mobility programmes.

Regarding other cooperation opportunities, for the NMC it is an important cooperation with IASST which is known as the International Association for Safety and Survival Training which is working to improve safety and rescue training, which is also one of the primary areas of maritime education. As

mentioned in the SAR p.49, the IASST regularly organizes conferences and seminars, thus facilitating communication, strengthening contacts with already known partners, as well as building new partners with the maritime industry from around the world, addressing common maritime issues.

During an onsite meeting an expert group identified that the NMC mostly has students from Latvia. Some of the students are from Lithuania, Estonia, Ukraine, Georgia. It can be said that the NMC is a popular choice among local students but possibly the NMC should find ways to expand more to the foreign market in a sense they bring their noticeability and bring awareness of what they can offer as an education institution in this field. As far as the expert group found out, the NMC is well-known in the Baltics region. It is advanced and modernized and has very serious, realistic equipment, training center, but it is advisable that they work on their marketing, promotional activities.

1.5.3. The NMC does have a procedure of attracting foreign students, although it is rather limited to the Baltic region, Ukraine and Georgia. NMC participated in the local exhibition “Skola” which helps to recruit and attract local students, but it is not clear exactly what is being done to attract foreign students except social media. They are actively using social media as a Facebook platform to inform of study programmes and opportunities to study at their college. The information is actively updated there and also recently some information was published regarding the application process. Regarding attracting teachers from abroad, a limited number of foreign experts are recruited as guest lecturers. The expert group advises that NMC invites more lecturers from abroad. Of course, the NMC realizes the necessity as well as the aspect that guest lecturers cost larger salaries and that question is related to resources and capabilities to pay for that from the financial income of the NMC. Expert group advises that the NMC improves its cooperation, communication tools to attract students and lecturers from abroad. As the study language is English, language would not be a barrier which is also a great benefit for them to use this aspect as a positive tool. Because of these aspects, the system of attracting foreign students and lecturers is considered partially effective.

As previously mentioned in the analysis, current students are not interested in study mobility as they are already working on board and studying part-time. It is not considered as a disadvantage but rather a specificity of the study process that is for maritime seafarer profession. Those who are willing to take part in ERASMUS+ training from 2 to 12 months are offered to have such an opportunity. As also indicated by the NMC SAR p. 52, in the student NOVIS system, information about opportunities in the ERASMUS + program is sent to students every month. The main reason why students do not go on internship mobility in ERASMUS + programs is that the ERASMUS + program supports internships located in European countries for a minimum of 61 days. A large proportion of students work in parallel, which affects their motivation to participate in mobility which supports the argument of working students. In the past years, there have been students who have gone abroad, although none of the graduates when asked did use the opportunity of study exchange. According to the SAR p. 51, 70 ERASMUS + student mobilities have taken place and all student mobilities were outgoing although there is no other proof to support such information as a student or graduate who was participating in either a training or study mobility.

Regarding teaching staff mobility, they are more active than students and during onsite meetings with the academic staff, they mentioned various examples of how they have got involved in the mobility programmes. The most common is the EU funded ERASMUS + and they have gone to conferences, lecturing and also training abroad to Lithuania, Poland, Germany. According to the SAR p. 52, in the spring of 2021, 6 virtual exchange mobilities were implemented with The Fisheries and Marine Institute, part of the Newfoundland Memorial University in Canada.

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

Overall, there is an existing system of cooperation and internationalization of the NMC. NMC is very active and effective locally with employers and provision of workplaces for the students. Although, it has to be noted that there are improvements needed in the internationalization part and cooperation with institutions abroad, foreign student and lecturer attraction to NMC as well as involvement of students in mobilities if possible to the capabilities of the NMC study specificity.

Strengths:

1. Strong cooperation with local institutions and employers;
2. Students are provided with work places while studying;
3. NMC offers students with possibilities of various study and training mobility with ERASMUS+ funding;
4. Active teaching staff in mobilities.

Weaknesses:

1. Limited collaboration with institutions abroad;
2. Lack of foreign students and guest lecturers from other countries.

### **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:** Partially compliant

NMC has very strong cooperation with local institutions but not so strong with foreign organizations abroad. It should be improved.

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

### **Analysis**

There have been a few recommendations received from the previous accreditation process from 6 years ago that had been advised for the NMC to take into consideration and implement in order to improve the study processes and overall quality of the studies and NMC as an institution. Altogether there have been 9 recommendations.

First recommendation is regarding the compulsory civil protection course and the content of civil protection implementation in study programmes and it has been done by the NMC. The college has made the changes in the study programs "Maritime Transport" and "Marine Engineering", a training course was introduced: "Civil Defense" in the amount of 1 credit point.

Second recommendation is regarding implementation of a course of Latvian language as a compulsory course for foreign students as it is a mandatory precondition of Law on Higher Education Institution to have a course in the language of the state. The NMC has taken into consideration this recommendation and has implemented the course "Latvian Language for Foreign students" in the study programs "Maritime Transport" and "Marine Engineering".

Third recommendation is regarding implementation and accreditation of the study programs under the study field of "Seafaring" until 2021. This recommendation is still in process as this procedure of accreditation is currently being executed.

Fourth recommendation addressed the library resources and stated that they have to be improved. The library itself in NMC is very small and on hand literal books there are in small amount. As specified by the NMC, that is one of the reasons why they have worked during these years on more active implementation and improvements of the NOVIS platform. It is seen as a more useful and logical approach to submit all the necessary study materials there as a large part of the students are not on site but in the sea thus for them the books either way are not practical and accessible. All the necessary study materials are uploaded on NOVIS platform thus there is no lack of resources or accessibility of students to study materials. NMC has also concluded cooperation agreements with two institutions locally - Rīga Technical College and School of Business Administration "Turība" which allows NMC students to access their libraries in case of need. Thus, it can be stated that this recommendation has also been taken into account.

Fifth recommendation received is regarding student involvement in research. This recommendation has been implemented to the extent it is possible to be done for a college as it is not a mandatory precondition for the colleges in general. The main task of a college is to prepare specialists for the labor market and provide them with the necessary practical skills for their jobs and is not aimed at academic research activities. As NMC points out, every student has to do their research work at the end of their studies and defend it. Some of the students who are more interested in participation in projects or study exchanges can do so as well as conferences here and abroad. It seems like a reasonable amount of research for college level studies.

Sixth recommendation regards offering academic teaching staff professional development opportunities. It can be said that the NMC has taken into account the recommendation made and managed to provide more opportunities to their academic staff to educate themselves and broaden their knowledge. One of those ways has been involvement of ERASMUS+ projects abroad in Lithuania, Poland, Germany. Some of the places and examples where staff have gone to an exchange are Lohja, Finland in 2017, Eggersund, Norway in 2020 and Constanta, Romania in 2021. NMC has encouraged the academic staff to participate in local and international seminars, conferences. Some of the lecturers mentioned that NMC provided an opportunity to improve their English language skills. One of the seminars academic staff was provided to take part in was Seminar: "The role of strategic partnership in improving the quality of higher education". It can be concluded that this recommendation also has been taken into consideration and resolved.

Seventh recommendation addresses establishment of sustainable cooperation with other similar higher education institutions. Since the recommendation, NMC has become more active and involved into the College Association, concluding new cooperation agreements with various higher education institutions in Latvia as Latvian Maritime Academy, Riga Technical College, Riga Technical University. The NMC has also expanded their EU partners of ERASMUS+ mobility projects which is a crucial aspect. They have added to the list such European shipping companies for cooperation as Utkilen, Wilhelmsen, V-Ships, Stena Line, Norbulk, MOL. It can be said that the NMC has managed to resolve this recommendation.

Eighth recommendation addresses improvement of material and technical base of the NMC. This aspect has been significantly improved and the college can be proud of the improvements it has made on this question. Since the last accreditation NMC has managed to implement and now offers a new, interactive and innovative learning environment that is updated with all the latest technology being designed to help students learn with world-class equipment. Modern simulators are used for education and training - 4 full navigation bridges, dynamic positioning simulator, 6 small navigation bridges, 7 engine room control rooms, WARTSILA RT-Flex simulator, liquid cargo simulators (8 workstations), high voltage simulator, electrical laboratory, welding workshop, altitude simulator,

parts of a real wind turbine, various survival simulators and other equipment. A new swimming pool has just been built, which is a real complex of safety and survival simulation with wind, waves, rain, etc., which can provide a real simulation of sea conditions. Inside the pool there is a Helicopter Simulator (HUET), which provides an opportunity to learn various tasks related to the evacuation of aircraft in distress. It is an amazing improvement in expert group opinion.

With regards the ninth recommendation that the study direction is based on one study program and that the implementation plan needs to be significantly improved. As the last accreditation happened rather a long time ago, it has to be noted that the college went through various changes. Now it has two programs - "Maritime Transport" and "Marine Engineering" and since 2014, the study programs have undergone numerous audits and have changed significantly, as well as the material and technical base has significantly improved.

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

The NMC has taken into account all the recommendations that have been made by the previous accreditation. There are significant improvements made within the study field and study programmes. The overall quality of studies, provision of resources, mobility exchanges are updated and improved.

Strengths:

1. All of the recommendations are taken into account;
2. The college has worked on elimination of the weaknesses of their study field and programs;
3. Opportunities for the teaching staff to develop their skills have been introduced;
4. Advanced technical equipment is offered to students

Weaknesses:

None.

### **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

All of the deficiencies have been eliminated and taken into account.

### **1.7. Recommendations for the Study Field**

#### **Short-term recommendations**

- |  |
|--|
| 1. It is necessary to continue to improve and develop the full-time study process, including the methodological provision of studies.  |
| 2. It is highly desirable to have the online access both for the students and teaching staff to the platforms of International Maritime Law in order to have the latest versions of those documents.   |
| 3. Develop a plan or other document that captures each academic staff member's field of interest in the applied research and enhance them to get more outlined benefits from scientific/creative work. |

4. It is highly recommended to provide a separate director for each study programme ("Marine engineer" and "Maritime Transport") because it is a very huge workload for one person to be in charge of both study programs and also of the whole study field.
5. It is of high importance in the future to involve external stakeholders i.e. employers and graduates in the educational quality assurance system as currently this participation is lacking.
6. Students are lacking free and unrestricted access to complaints and suggestions procedure. It must be included and provided to the students as a part of the inner quality assurance system in the future.

## Long-term recommendations

1. In the long term view, it is desirable to consider the possibility of supplementing the study process with modern technologies, such as MASS technology and special IT competencies.
2. It is important to find opportunities to attract more students both from Latvia and abroad in order to promote the increase of the number of students and the profitability of the programs implemented.
3. It's necessary to step up efforts to improve and organize the new laboratories of engine control systems with pneumatic and hydraulic elements to provide an opportunity for students (especially full time students) to undergo appropriate practical training on shore. This should be done despite the fact that the NMC has an agreement to use the icebreaker "Varma" for practical training purposes as there are a number of skills that cannot be acquired in an on-board environment due to impossibility to intervene in live systems.
4. It would be advisable for the NMC to consider expanding the range of educational programmes offered, namely, to consider the possibility of providing 5. LKI level program "Ship's Electro-automation specialist" and the following further education programmes: "Deck officer on ships of less than 500 GT", "Engineer on ships of less than 750 kW" and "Master on ships of less than 50 GT". This recommendation is not mandatory.
5. It is advised for the college to improve their cooperation with various institutions abroad for the purpose of students to get practical skills on ships abroad and try to involve students in such opportunities.
6. In case of NMC's decision to continue development of applied research in the field of modeling of navigational channels, it is advisable purchasing and using specialized modeling tools, such as the Wizard. This recommendation is not mandatory.
7. NMC must follow and focus on STCW requirements when graduates may choose a broader career path. This aspect should be taken into account in Quality Policy for the future.
8. It is highly advised that the NMC attracts guest lecturers from abroad that would improve the cooperation and internationalization of the college as well as ensure greater range of exchange of the knowledge and brand building.

## II - "Maritime Transport" ASSESSMENT

### II - "Maritime Transport" ASSESSMENT

#### 2.1. Indicators Describing the Study Programme

## Analysis

2.1.1. The study programme “Maritime Transport” is approved by the Registry of Seamen and certified by the Ministry of Transport as well. The programme is compliant with the study field as the main focus of the study programme is to prepare deck officers in compliance with the requirements of the STCW convention. According to the information provided by MAL around 95% of graduates are employed according to the acquired professional qualification onboard the ships.

2.1.2. The aim of the study programme is to prepare competitive specialists for the labor market in accordance with the requirements of Standard A-II/1 of the STCW Convention and reduced requirements of the Standard A-II/2.

Decipherment of the first level higher professional education study programme "Maritime Transport":

- Programme`s code 41 525 (41 - first level professional higher education (EQF level 5); to be implemented after obtaining general or vocational secondary education; duration of studies in full-time studies from two to three years; 525 - thematic area “Mechanical Engineering (Motor Vehicles, Ships and Aircraft”));
- Professional qualification - Deck Officer;
- Amount of credit points - 177 ECTS (119 Latvian CP);
- Duration - 6 semesters (3 years - for full time studies), 7 semesters (3 years 2 months for part time extramural studies).

Admission requirements for full-time and part-time studies are different, namely, only persons with relevant seagoing experience in the deck department can apply for part-time studies. Learning outcomes achieved in the programme should be the same despite the form of study. It means that admission requirements should acknowledge expected competencies of candidates.

The candidate must submit formal documents like certificate of secondary education or certificate of vocational secondary maritime education. Proficiency in English shall be at least B2 level.

The title, code, professional qualification of the study programme, aims, objectives, learning outcomes and admission requirements are well interrelated. Also, the duration and scope of the study programme are reasonable to obtain professional qualification at the end of the study process.

The program includes English language teaching at 7 CP despite it being required in admission. The implementation language is English, which is the main maritime language in the world.

2.1.3. It is important to highlight that within the accreditation procedure of the study field "Seafaring", a new type and form of study process is in preparation for full-time study, however details including documentation has not been presented for experts. Experts are of the opinion that turning on full-time studies in parallel with part-time probably would increase the number of students and graduates. Impact of the changes shall be monitored by College and by external evaluations.

Changes in the study programme result from the surveys of the educational quality system, monitoring of the results achieved by students. They are also a result of legal changes, including STCW Convention, which the programme is particularly linked to.

2.1.4. The shortage of qualified maritime professionals (deck and engine as well) is the main demand factor for graduates of Novikontas Maritime College (NMC). There is positive feedback from shipowners which confirms that focusing on practical skills during the study process ensures that the graduates after completion of the study programme are fully prepared to work onboard as ship's

officers. The dynamic of enrolled students shows that NMC is a niche player as the average number of enrolled students for deck officers is around 25- 30 students per year. Probably offering this programme also as a full-time programme will lead to the increased number of enrolled students and total number of students in the future.

The main issue is the relatively small number of graduates compared to the total number of students. According to the information obtained during the onsite visit around 255 students are studying (from which 185 are deck officers) in the NMC. The total number of NMC graduates is 49. 32 of them have obtained the qualification "Deck Officer". By December 1, 2021, 31 graduates of Study Programme "Maritime Transport" continue to work in the maritime industry (data is obtained from the SAR p.65). From the experts opinion the total number of graduates is small in comparison with the number of enrolled students. In the light of above NMC has to evaluate dynamics of the number of students and graduates. As statistics show, there are not enough graduates while the number of students is more or less constant. College has to take measures to motivate its students to do their studies according to the study plan of the programme.

2.1.5. N/A

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

The study programme meets the requirements of the study field and is in line with the relevant requirements of the national and international legislation. The demands of the labor market and industry are met as well. The employers confirmed that they are highly satisfied with the professional competence of graduates and they are looking forward to welcome more such new specialists.

Strengths:

1. The shortage of qualified maritime officers is a major driver of demand for graduates of NMC, merchant marine officers are in high demand in the EU and worldwide.
2. Positive feedback from the employers (shipowners) regarding the graduates of the programme.

Weaknesses:

1. The area of concern is the relatively small number of graduates in comparison with the number of enrolled students.

## **2.2. The Content of Studies and Implementation Thereof**

### **Analysis**

2.2.1. According to the information from the Registry of Seaman the content of the study courses / modules is interconnected and complementary. The programme generally complies with the Cabinet of Ministers Regulations No. 710 "Regulations for the Certification, Implementation and Supervision of Vocational Training Programs for Seafarers" and the relevant standards of the STCW Code. The content of the programme is based on relevant IMO model courses for deck officers and fully comply with the relevant requirements of the Section A-II/1 of the STCW Code and the Cabinet Regulations No. 141.

Programme content has been developed on the virtue of the professional standards, taking into consideration requirements of the STCW Convention and model course. It is acknowledged by a certificate of conformity obtained by NMC which confirms that the relevant STCW Standards are covered. Different stakeholders were involved in the elaboration process of content. The College

proposed a detailed set of learning outcomes which seems to be in line with specific requirements related to navigational programmes. It consists of compulsory general study subjects in scope of 22 CP, applied professional subjects in scope of 36 CP containing navigation, celestial navigation, ship's stability, electronic navigational equipment, ship's handling and other. The sequence of acquisition of the courses is logical, directed from the general to the particular and from the simple to the complex that ensures the stage-by-stage development of the knowledge and skills acquired within the program. Integrated part of the programme is seagoing practice having 52 CP which equals to 43% of the whole programme workload.

However not all written descriptions of the study courses contain the following or containment is not full (as per Law on Higher Education Institutions):

- a) determine the aims for the implementation of the study course and the planned learning outcomes – some study courses need slight improvement;
- b) outline the content of the study course necessary for the achievement of learning outcomes, contain the study course calendar, mandatory and supplementary literature, indicate other sources of information – some study courses need slight improvement;
- c) describe the organization and tasks for the independent work of students – partially not covered;
- d) properly determined the evaluation criteria of learning outcomes.

In addition it is important to note that in the Annex of the SAR NMC has analyzed the compliance of the content of the study programme “Maritime Transport” with the requirements of the Professional Standard “Deck officer”, approved by PINTSA on February 23, 2007.

#### 2.2.2. N/A

2.2.3. The students admitted to the part time programme are support level maritime professionals with a considerable seagoing experience as deck ratings, and they continue to work on board ships during the studies. This contributes to the better achievement of the learning outcomes, both theoretical and practical. It also helps the principles of student-centred learning, i.e., students can choose what they will learn, how they will pace their learning, and how they will assess their own learning. In this respect, the syllabus of the programme contains general description of the subjects, with no detailed training objectives. In student-centred learning aforementioned study aspects shall be more specific in order to help students guide their learning and ensure compliance with the aims of the programme, the STCW Convention and the recommendations of the relevant IMO Model Courses, and, finally, reach the required knowledge, understanding and proficiency of the relevant competence.

NMC is focused on all the aspects, that the student's voice is heard and the student can highly affect the educational process. NMC recognizes student's diversity, taking into account that the students have different professional experience, educational background, knowledge and skills. In this respect students can decide not only on the way how to perform learning activities, but also which study modules in which sequence will be followed.

The most important principles implemented by NMC in part time programmes are:

- Active learning principle, namely, all the students shall be active during the educational process, this is the reason why a lot of practical exercises are used to engage the student and to make him/her reflect on the competences s/he gains;
- Individual approach for each student, namely, NMC does not have one static approach for all students. The program and teaching/learning activities state the learning outcomes, which shall be reached by the students, but how that outcomes will be reached, by what learning methods, what

media is used for that – in most cases is decided by the student/s.

Experts can not analyze the process of the full time studies because the full time programmes are not implemented yet. Only the relevant documentation is elaborated and available. In the light of above the experts can assume, that as the part time study programme is delivered in an appropriate way without major objections then also the full time programme has all necessary preconditions to be delivered in the same manner. The College is using the NOVIS study platform and it was verified that all the study materials are available for students. Study materials (tasks, books, guidelines etc.) are available in English. In the light of full-time programme the experts are in opinion that NMC should consider an opportunity to provide programme implementation in official language (Latvian), especially full-time programme, to give an opportunity to those young people who after graduation of high school does not feel proficient enough in English to study in English all academic and professional study courses. It would be particularly useful for the first year students.

2.2.4 Students acquiring the programme mostly work in a relevant capacity of a deck rating, therefore, they, in fact, are already provided with the on-board training facilities (which is beneficial to the practical training as such). Moreover, the specific requirements for the knowledge, understanding and proficiency of the officer in charge of a navigational watch are laid out in the relevant on-board training record books. These record books are structured in line with the relevant functions and standards of competence of the STCW Code. On-board training record books are an integral part of the education programme and are issued by the Registry of Seamen. In addition, the procedure of evaluation of the results of the on-board training covers all the relevant aspects. Therefore, the organization and implementation of the on-board training comply with the applicable requirements and internship is effective.

2.2.5. N/A

2.2.6. During the on-site visit it was verified that the topics of students' final theses are relevant to the field and correspond to the study programme. During the interviews the students pointed out that the topics of final theses are mostly about ships passage planning. This is relevant to the study field and corresponds to the study programme.

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

The content of studies and implementation correspond to the relevant requirements of binding national and international legislative enactments. As the area for slight improvements could be identified the syllabus of the programme where detailed training objectives and assessment criteria in some places should be reviewed and described in a more detailed way.

Strengths:

1. The content of programme is based on relevant recommendations of IMO model courses for deck officers.
2. NMC is focused on all the aspects, that the student's voice is heard and the student can highly affect the educational process.
3. The students of the part time programme are working onboard the ships during the study process. This ensures that life equipment and facilities can be used for studies and practical tasks.

Weaknesses:

1. Lack of experience of implementing full time educational programmes.
2. There is a need for slight improvements in the written descriptions of some study courses.

## **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. The analysis in this section is based on information obtained from the SAR (pp. 74-79), relevant interviews during the onsite visit, as well information provided by the Registry of Seamen. Although the form of the study (part time extramural) expects that most of the practical and even theoretical tasks are carried out by distance (e.g. onboard ships), some skills cannot be acquired in an onboard environment due to the impossibility to intervene in live systems or equipment on board (e.g., different aspects of operation and troubleshooting of electronic systems). These skills require special simulation equipment onshore to ensure a successful outcome of practical training. In this regard, the educational institution has a sufficient number of different types and purpose simulation equipment. During the on-site visit it was ensured that the college is very well supplied with material and technical provision for achievement of the learning outcomes and indicate the possibility to ensure a high-quality study process. For instance, full mission Bridge Simulators provides students with the competence "To carry out navigational watch", Liquid Cargo Simulators provides students with competence - "To carry out cargo watch". There are many other examples of successful use of simulators in the study process. Strong and sustainable financial provision comply with specific features and the conditions for the implementation of the study programme, creating prerequisites for the achievement of the learning outcomes.

NMC presented informative provisions indicating the possibility to ensure a high-quality study process. NMC database provides students with access to study and scientific literature in electronic format in all study courses, which facilitates studies and provides students with easy access to study materials, even on board, which is especially relevant for part-time students. On the basis of cooperation agreements, NMC students have the opportunity to use the resources of RTU Olaine College of Technology and Riga Technical College (RTK) for the acquisition of study programmes, including the library.

In conclusion it is important to note, that the requirements for material and technical provision of both study programmes implemented by NMC differ significantly, taking into account the relevant professional competences to be achieved during the study process. In this respect the situation in the study programme "Maritime Transport" is much better, because the most of the technical equipment which is essential for achievement of the learning outcomes is available at the premises of the college, thus there is no need for use of training facilities outside the college.

2.3.2. N/A

2.3.3. The funding available for the implementation of the study programme is sufficient to ensure the part time and full time study process. It is important to highlight that taking into account the relatively small number of enrolled students and graduates, the profitability of the study programme is not high. However, taking into account information provided in SAR (pp. 80-82) the study programme has the minimum number of students to ensure the positive profitability of the study programme. Study fee for part-time and full-time students is the same - 1960 EUR per year. NMC

explained that the minimum number of students in the study programme in order to ensure the profitability of the study programme (part-time, full-time) at the same time - 50 people.

As it was explained by the founder and management, the implementation of the program financially could be supported by the income earned from the implementation of a wide range of the seafarers' short training courses.

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

The resources of NMC are sufficient to ensure the efficient implementation of the study programme "Maritime Transport". The study infrastructure, equipment, and simulators available in the college are modern and correspond to the goals and planned results of the program. It is important to note that a large part of the practical training foreseen in the study process is currently carried out while on board.

Strengths:

1. Modern simulators are used for the study process.
2. Efforts of NMC for continuous improvements in material and technical provision.

Weaknesses:

None

### **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

The study provision, informative provision, material and technical provision, and financial provision comply with the requirements of the STCW Convention and ensure the achievement of learning outcomes.

## **2.4. Teaching Staff**

### **Analysis**

2.4.1. 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 (if required). Moreover, as required by the regulation I/6 of the STCW Convention, the teaching personnel involved in the implementation of the professional subjects is qualified for the particular types and levels of training or assessment of competence of seafarers, and certified by the Registry of Seamen. It was also observed that not all teaching staff members are proficient in the official language at a conversational level. Also in the Annex of SAR is the statement of NMC certifying that only a part of academic staff members fully complies with the requirements of the state language. Nevertheless, as the language of implementation of the programme is English, communication problems between the students and teaching staff do not arise, as all the teaching staff members and students are proficient in English.

2.4.2. Changes in the composition of the teaching staff is not an often occurrence within implementation of the study programme. Such changes for the form of distance-learning would not

have a big impact on the study process, as such a form of programme implementation is more flexible both for students and teachers. However, for the full-time studies the College should take into consideration that new/reserve teaching staff should be available on a short notice, as well as should be familiarized with the programme itself (study materials, schedule etc.) as well as College's internal rules and especially with the Quality Assurance system.

From SAR (pp. 82-84) it is clear that in the process of implementation of the study programme "Maritime transport" are involved 3 docents, 7 lecturers and 12 guest lecturers. The teaching staff consists of 2 guest lecturers with a doctoral degree, at least 2 lecturers are currently studying in the doctoral study programme. Professional study courses are taught by guest lecturers and lecturers with a master 's degree and professional experience in the field corresponding to the study course.

It was verified that the College has 3-step procedure for training of teaching staff:

- 1) Instructor-accessor training course (Registry of Seamen developed and approved course);
- 2) Developer of training/education programme;
- 3) Accessor of training/education process.

This procedure can likely ease the process of familiarization of a new teacher.

#### 2.4.3. N/A

2.4.4. Taking into account the professional "character" of the programme, the scientific "elements" are somewhat expelled from it as hardly any evidence of scientific development or plans was obtained. The interviews with teaching staff highlighted that mostly applied research activities and the outcomes are integrated in the study process, directly involving teachers. For example, teaching staff was involved in "Modeling of the Liepāja Port Navigation Channel on a Simulator" performed in 2017. Unfortunately, there are not many such good examples.

From SAR (pp. 82-84) it is evident that all teachers involved in professional study courses have at least five years' experience in the maritime field. They possess maritime professional qualifications.

2.4.5. A mechanism for mutual cooperation of the teaching staff in the implementation of the study programme has been established, namely, the meetings between the staff involved and director of the study programme and study field are organized on a regular basis. This ensures the achievement of the aims of the study programme and the interconnection of study courses within the study programme.

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

Teaching staff involved in the implementation of the study programme are experienced ex-seafarers appropriately qualified for the subjects that they are responsible for. It is necessary to put more efforts from the College to involve teaching staff in the research work. The experts' team came to the common opinion that teaching staff and students would undoubtedly get more benefits from scientific/creative work by participating in the external activities (conferences, projects etc).

Strengths:

1. Teaching staff of professional subjects are maritime professionals with the relevant seafarer's qualification and seagoing experience.
2. Compliance with the Regulation I/6 of the STCW Convention.

Weaknesses:

1. Teaching staff and students should be more involved in the scientific/creative work.

## 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 professional qualification and experience of teaching staff involved in the implementation of the study programme is in line with the requirements of the binding 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:** Fully compliant

The study program fully complies with the Cabinet Regulations No.141 "Regulations on the first level Professional Higher Education State Standard".

- 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

1) The study programme is approved by LMA, as a result Certificate of Conformity of Ministry of Transport [No.373] was issued in 2016.

2) Certificate of Conformity confirms that the relevant STCW Standards are covered.

3) Certificate of Conformity confirms that the relevant IMO Model courses were used and covered while development the programme.

4) Professional qualification is granted after final exam in the Registry of Seamen or in case of a joined exam at College.

5) Professional standard is covered (Professional Standard "Deck officer" approved by PINTSA on February 23, 2007, was used by NMC to analyze the compliance of the content of the study programme "Maritime Transport").

- 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:** Partially compliant

1. During the on-site visit it was verified that all the study materials are available for students in the NOVIS platform. All study materials (tasks, books, guidelines etc.) are available in English.

2. Not all written descriptions of the study courses contain the following or containment is not full (as per Law on Higher Education Institutions):

a) determine the aims for the implementation of the study course and the planned learning outcomes – some study courses need slight improvement;

b) outline the content of the study course necessary for the achievement of learning outcomes, contain the study course calendar, mandatory and supplementary literature, indicate other

- sources of information – some study courses need slight improvement;
- c) describe the organisation and tasks for the independent work of students – partially not covered;
- d) determine the evaluation criteria of learning outcomes.

- 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:** Fully compliant

The sample of diploma complies with the Cabinet Regulations No.202, according to which state recognized documents of higher education are issued.

- 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:** Partially compliant

It was observed that not all teaching staff members are proficient in the official language at a conversational level. Also in the Annex of SAR is the statement of NMC certifying that only a part of academic staff members fully complies with the requirements of the state language. However, as the language of implementation of the programme is English, communication problems between the students and teaching staff do not arise, as all the teaching staff members and students are proficient in English.

- 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

During the on-site visit it was verified that all teaching staff members involved in the implementation of the study programme are proficient in English. The “MS Excel” document in the Annex of the SAR specifies the knowledge level of the English language of each academic

staff member.

- 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

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

- 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

NMC has an agreement with the Liepaja Marine College to provide students with the opportunity to continue their education in another college in case the implementation of the NMC study programmes has been terminated. Liepaja Marine College has similar study programmes for navigators, as well as full time and part time study programmes. Programmes are licensed, accredited and have certificates of conformity issued by the Ministry of 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

NMC has confirmed that students are guaranteed compensation for losses if the study programme is not accredited or the study programme's license is revoked.

- 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

Overall programme is compliant with the requirements of the Section A-II/1 and reduced requirements of Section A-II/2 of STCW Code. As well as compliance with Cabinet Regulation No.710 "Regulations Regarding Certification, Implementation, and Monitoring of Professional Training Programmes for Seafarers" is approved and a certificate of conformity issued by the Ministry of Transport (No. 373, issued 08.02.2016.) confirms that.

However there are some recommendations regarding the programme's documentation, implementation etc., described below in the Section 2.6.

### **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

The study programme mostly complies with the requirements of the Law on Higher Education Institutions where it is applicable and other binding regulatory enactments. However the study course descriptions need slight improvement.

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

The study programme "Maritime Transport (41525)" is well grounded and complies with the relevant requirements of the Latvian legislation in the field of higher education and meets the requirements of the STCW Convention.

The processes of development and review of study program are well organized and regulated by the NMC QMS procedure "Development, Inspection and Regular Inspection of Study Programs". An internal audit is carried out every year in accordance with the schedule in order to continuously check the content of the study program and study courses for compliance with the industry and labor market needs. If deficiencies / inconsistencies are identified during the audit, the director of the study program draws up a plan for how the content will be updated and agrees with the QMS specialist.

Nevertheless the slight improvements are required regarding the study course description (for closer information please look at the recommendations described in the Chapter.2.6.).

### **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. The study course descriptions should be reviewed and where it is necessary appended with the relevant information as per Law on Higher Education Institutions. For instance, each study course description has to be appended with the description of organization and tasks for the independent work of students and appended with thorough evaluation criteria of all learning outcomes.

#### **Long-term recommendations**

1. NMC should consider an opportunity to provide programme implementation in official language (Latvian), especially full-time programme, to give an opportunity to those young people who after graduation of high school does not feel proficient enough in English to study in English all academic and professional study courses. An important nuance in this regard is that not all lecturers have an appropriate knowledge level of the official language.

2. NMC has to evaluate dynamics of the number of students and graduates. As statistics show, that there are not enough graduates while the number of students is more or less constant. College has to take measures to motivate its students to do their studies according to the study plan of the programme without any delay in time.

3. The NMC should find way how to increase the involvement of the students and teaching staff in the scientific/creative work.

## II - "Marine Engineer" ASSESSMENT

### II - "Marine Engineer" ASSESSMENT

#### 2.1. Indicators Describing the Study Programme

##### Analysis

2.1.1. The study programme "Marine Engineer" is approved by the Registry of Seamen and certified by the Ministry of Transport as well. According to the information obtained from MAL around 95% of graduates are employed according to the acquired qualification onboard the ships. The study programme "Marine Engineer" fully corresponds to the study field "Seafaring".

2.1.2. The aim of the study programme is to prepare competitive specialists for the labor market in accordance with the requirements of Standard A-III/1 of the STCW Convention and reduced requirements of the Standard A-III/2.

Decipherment of the first level higher professional education study programme "Marine Engineer":

- Programme's code 41 525 (41 - first level professional higher education (EQF level 5); to be implemented after obtaining general or vocational secondary education; duration of studies in full-time studies from two to three years; 525 - thematic area "Mechanical Engineering (Motor Vehicles, Ships and Aircraft"));
- Professional qualification - Marine Engineer;
- Amount of credit points - 175 ECTS (118 CP);
- Duration - 2 years and 10 months (for full time studies), 3 years (for part time extramural studies).

Admission requirements for full-time and part-time studies are different, namely, only persons with relevant seagoing experience in the engine department can apply for part-time studies. Proficiency in English shall be at least B2 level.

The title, code, professional qualification, aims, objectives, learning outcomes and admission requirements are well interrelated. Also, the duration and scope of the study programme implementation are reasonable to obtain ship's engineer officer professional qualification at the end of the study process. The implementation language is English, which is the main maritime language in the world.

2.1.3. Within the accreditation of the study field, the title of the qualification will be changed from "Officer in charge of an engineering watch with a main propulsion machinery of 750 kW or more" to "Marine Engineer" with the aim that the title of the NMC study programme will be equal to the title of the profession specified in the professional standard. Experts support the changes made.

2.1.4. The present shortage of qualified merchant marine officers (deck and engine as well) is the main demand factor for graduates of NMC. There is positive feedback from shipowners which confirms that focusing on practical skills during the study process ensures that graduates after completion of the study programme are fully prepared to work onboard as ship's officers. The dynamic of enrolled students shows that NMC is a niche player as the average number of enrolled students for engineering programme is around 10 - 15 students per year. Probably offering this programme also as full-time programme will lead to the increased number of enrolled students and therefore the total number of students as well in future.

The main issue is the relatively small number of graduates compared to the total number of students. According to the information obtained during the onsite visit around 255 students are studying (from which 185 are deck officers) in the NMC. However during the last 5 years the average

number of graduates of the study programme “Marine Engineer” does not exceed 5 persons per year. During a meeting with employers it was clearly stressed that programme’s graduates are well qualified and are welcomed on board.

So, turning on full-time studies in parallel to part-time studies probably will bring up the number of students and graduates.

2.1.5. N/A

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

The study programme “Marine Engineer” meets the requirements of study direction and is in line with the relevant requirements of the national and international legislation. The demands of the labor market and industry are met as well.

Nevertheless the college has to put more efforts to motivate the students to complete the study process within the duration of the programme. Also more efforts should be taken to attract the youngsters to choose the marine engineers` profession.

Strengths:

1. The present shortage of qualified merchant marine officers (deck and engine as well) is the main demand factor for graduates of NMC, there is a shortage of qualified maritime professionals in the EU and around the world.
2. Very positive feedback from the employers (shipowners) regarding the graduates of the programme.

Weaknesses:

1. The area of concern is the relatively small number of graduates.

## **2.2. The Content of Studies and Implementation Thereof**

### **Analysis**

2.2.1. According to the information from the Registry of Seaman the content of the study courses / modules are interconnected and complementary. The programme generally complies with the Cabinet Regulation No. 710 “Regulations for the Certification, Implementation and Supervision of Vocational Training Programs for Seafarers and the relevant standards of the STCW Code.

Analyzing detailed information provided by NMC, namely Annexes: “Marine Engineering” study program compliance with the specific regulatory framework of the relevant field, Compliance of the study programme “Marine Engineer” to profession standard and Compliance of the study program “Marine Engineer” with the State Education Standard, an expert group concludes that the content of the study programme complies with national and international education and professional regulations.

Some written descriptions of the study courses containment is not full (as per Law on Higher Education Institutions ). Relevant expert recommendations are as follows:

- a) define the requirements for the commencement of the acquisition of the study course – partially not covered;
- b) determine the aims for the implementation of the study course and the planned learning outcomes - need slight improvement;
- c) outline the content of the study course necessary for the achievement of learning outcomes, contain the study course calendar, mandatory and supplementary literature, indicate other sources

of information – the content of the some study course is not detailed enough, e.g. “Refrigeration plants”, “Boilers” etc.;

d) describe the organization and tasks for the independent work of students – partially not covered;

e) determine the evaluation criteria of learning outcomes – partially not covered.

In addition it is important to note that in the Annex of the SAR NMC has analyzed the compliance of the content of the study programme “Marine engineer” with the requirements of the Professional Standard “Engineer officer”, approved by PINTSA on February 23, 2007.

#### 2.2.2. N/A

2.2.3. Students admitted to the part-time programme are support level maritime professionals with a considerable seagoing experience (engine ratings), and they continue to work on board ships during the studies. This contributes to the better achievement of the learning outcomes, both theoretical and practical. It also helps the principles of student-centred learning, i.e., students can choose what they will learn, how they will pace their learning, and how they will assess their own learning. In student-centred learning aforementioned study aspects shall be more specific in order to help students guide their learning and ensure compliance with the aims of the programme, the STCW Convention and the recommendations of the relevant IMO Model Courses, and, finally, reach the required knowledge, understanding and proficiency of the relevant competence.

According to SAR (p. 97) NMC is focused on all the aspects, that the student’s voice is heard and the student can highly affect the educational process. NMC recognizes student’s diversity, taking into account that the students have different professional experience, educational background, knowledge and skills. In this respect students can decide not only on the way how to perform learning activities, but also which study modules in which sequence will be followed.

The most important principles implemented by NMC in part time programmes are:

- Active learning principle, namely, all the students shall be active during the educational process, this is the reason why a lot of practical exercises are used to engage the student and to make him/her reflect on the competences s/he gains;
- Individual approach for each student, namely, NMC does not have one static approach for all students. The program and teaching/learning activities state the learning outcomes, which shall be reached by the students, but how that outcomes will be reached, by what learning methods, what media is used for that – in most cases is decided by the student/s.

Experts can not analyze the process of the full time studies because the full time programmes are not implemented yet. Only the relevant documentation is elaborated and available. In the light of above the experts can assume, that as the part time study programme is delivered in an appropriate way without major objections then also the full time programme has all necessary preconditions to be delivered in the same manner.

2.2.4 Students acquiring the programme mostly work in a relevant capacity as an engine ratings, therefore, they, in fact, are already provided with the on-board training facilities (which is beneficial to the practical training as such). Moreover, the specific requirements for the knowledge, understanding and proficiency of the officer in charge of an engineering watch are laid out in the relevant on-board training record books. These record books are structured in line with the relevant functions and standards of competence of the STCW Code. On-board training record books are an integral part of the education programme and are issued by the Registry of Seamen. In addition, the procedure of evaluation of the results of the on-board training covers all the relevant aspects.

Therefore, the organization and implementation of the on-board training comply in full with the applicable requirements.

#### 2.2.5. N/A

2.2.6. During the interviews the students pointed out the topics of final theses are mostly about ships` engineering systems and associated equipment. This corresponds to the study programme. The Qualification Thesis Defense Commission always consists of 5 people, 3 of whom are representatives of the industry and employers.

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

The content of studies and implementation correspond to the relevant requirements of binding legislative enactments. As the area for slight improvements could be identified the study course descriptions of the programme where detailed training objectives and assessment criteria in some places should be reviewed and described in a more detailed way.

#### Strengths:

1. The content of programme is based on relevant recommendations of IMO model courses for engineer officers.
2. NMC is focused on all the aspects, that the student`s voice is heard and the student can highly affect the educational process.
3. The students of the part time programme are working onboard the ships during the study process. This ensures that life equipment and facilities can be used for studies and practical tasks.

#### Weaknesses:

1. Lack of experience of implementing full time educational programmes.
2. Some written descriptions of the study courses containment is not full.

### **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. Although the form of the study (part time extramural studies) expects that most of the practical and even theoretical tasks are carried out by distance (e.g. on board ships), there are a number of skills that cannot be acquired in on-board environment due to impossibility to intervene in live systems, or lack of relevant systems or equipment on board (e.g., different aspects of operation and troubleshooting of hydraulic, refrigeration, electronic etc. systems) and which require a designated classroom, laboratory, workshop, or simulator on shore. Moreover, this is of utmost importance for full-time education programmes. In this regard, the educational institution lacks some of the aforementioned facilities. In order to achieve the training outcomes, other relevant shore-based training facilities shall be provided (i.e. pneumatic, control systems` laboratories/workshops).

In addition, it should be noted, that during the on-site visit the representatives of the college informed that an agreement has been concluded with the Freeport of Riga Authority on the use of the icebreaker “Varma” to ensure the implementation of practical training in those areas where the college doesn't have an appropriate equipment. The relevant evidence was obtained that this possibility is really used.

During the on-site visit experts had an opportunity to evidence that very modern simulators are used in the study process, for instance, Engine room simulator with 7 control rooms, WARTSILA RT-Flex simulator, high voltage simulator etc.

Strong and sustainable financial provision comply with specific features and the conditions for the implementation of the study programme, creating prerequisites for the achievement of the learning outcomes.

NMC presented informative provisions indicating the possibility to ensure a high-quality study process. NMC database provides students with access to study and scientific literature in electronic format in all study courses, which facilitates studies and provides students with easy access to study materials, even on board, which is especially relevant for part-time students. On the basis of cooperation agreements, NMC students have the opportunity to use the resources of RTU Olaine College of Technology and Riga Technical College (RTK) for the acquisition of study programmes, including the library.

2.3.2. N/A

2.3.3. According to SAR (p.107) funding available for the implementation of the study programme is sufficient to ensure the part time and full time study process. It is important to highlight that taking into account the relatively small number of enrolled students and graduates, the profitability of the study programme is unclear. As it was explained by the founder and management the implementation of the program financially is strongly supported by the income earned from the implementation of a wide range of the active seafarers' short training courses.

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

The study infrastructure, equipment, and simulators available in the college are modern and correspond to the goals and planned results of the program. It is important to note that a large part of the practical training provided in the study process is currently carried out while on board.

Strengths:

1. Modern electronic simulators and other training equipment are used for the study process.
2. Efforts of NMC for continuous improvements in material and technical provision.

Weaknesses:

1. As a weak point, it should be noted that not all the relevant engineering equipment, which is essential for the practical tasks, is available in the college. For this reason, the icebreaker "Varma" is used, but the availability of the icebreaker for the study process is unclear during the winter season, when the icebreaker leaves the port.
2. Profitability of the study programme “Marine Engineer”, taking into account the relatively small number of 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:** Partially compliant

The study provision, informative provision, material and technical provision, and financial provision comply with the requirements of the STCW Convention and ensure the achievement of learning outcomes. Nevertheless, there is also room for some improvement, namely, the part of engineering equipment is not available at the premises of NMC.

## 2.4. Teaching Staff

### Analysis

2.4.1. 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 experience (if required). Moreover, as required by the regulation I/6 of the STCW Convention, the teaching personnel involved in the implementation of the professional subjects is qualified for the particular types and levels of training or assessment of competence of seafarers, and certified by the Registry of Seamen.

2.4.2. According to SAR (p. 110) comparing the number of teaching staff involved in the study programme during the period of opening the study field (2013/2014 academic year) with the data of 01.02.2022., has increased. The teaching staff consists of 2 guest lecturers with a doctoral degree, 2 lecturers are currently studying in the doctoral study programme. Guest lecturers and lecturers with a master's degree and professional experience in the field corresponding to the study course teach professional study courses. Changes in the composition of the teaching staff is not an often occurrence within implementation of the study programme.

Such changes for the form of distance-learning would not have a big impact on the study process, as such a form of study process is more flexible both for students and teachers. However, for the full-time studies NMC should take into consideration that new/reserve teaching staff should be available on a short notice, as well as should be familiarized with the programme itself (study materials, schedule etc.) as well as College's internal rules.

College has 3-step procedure for training of teaching staff:

- 1) Instructor-assessor training course (Registry of Seamen developed and approved course);
- 2) Developer of training/education programme;
- 3) Assessor of training/education process.

This procedure possibly can ease the process of familiarization of a new teacher.

During the last 3 years, there were a number of changes of Heads of Engineering Department in College. The negative effect was obvious within the implementation of short training courses. For the moment no negative effect was observed within the implementation of the study programme, but attention should be paid to this tendency.

2.4.3. N/A

2.4.4. Taking into account the professional "character" of the programme, the scientific "elements"

are somewhat expelled from it as hardly any evidence of scientific development or plans was obtained. The interviews with teaching staff highlighted that mostly applied research activities and the outcomes are integrated in the study process, directly involving teachers. All teachers involved in professional study courses have at least five years' experience in the maritime field. The experts' team came to the common opinion that teaching staff and students would undoubtedly get more benefits from scientific/creative work by participating in the external activities (conferences, projects, applied research, etc).

2.4.5. During the on-site visit it was verified that a mechanism for mutual cooperation of the teaching staff in the implementation of the study programme has been established, namely, the meetings between the staff involved and director of the study programme and study field are organized on a regular basis. This ensures the achievement of the aims of the study programme and the interconnection of study courses within the study programme.

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

Teaching staff involved in the implementation of the study programme meets the scope and requirements of the programme. Very positive remark is that all teachers of professional subjects are former management level engineer officers who are able to combine the acquisition of theoretical knowledge with practical skills.

Strengths:

1. Teaching staff of professional subjects are maritime professionals with the relevant seafarer's qualification and seagoing experience.
2. Compliance with the Regulation I/6 of the STCW Convention.

Weaknesses:

1. Teaching staff and students should be more involved in the scientific/creative work.
2. Very frequent changes of Heads of the Engineering Department.

### **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

During the on-site visit it was verified that the qualification and professional experience of the teaching staff complies with the requirements of binding 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:** Fully compliant

The study program complies with the Cabinet Regulations No.141 "Regulations on the first level Professional Higher Education State Standard".

- 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

- 1) The study programme is approved by the Registry of Seamen, as a result Certificate of Conformity of the Ministry of Transport [No.374] was issued in 2016.
  - 2) Certificate of Conformity confirms that relevant STCW Standards are covered.
  - 3) Certificate of Conformity confirms that relevant IMO Model courses were used and covered while development the programme.
  - 4) Professional qualification is granted after the final exam in the Registry of Seamen or in case of a joined exam at College (appropriately certified commission should present).
  - 5) Professional standard is covered ( Professional Standard "Engineer officer", approved by PINTSA on February 23, 2007 was used by NMC to analyze the compliance of the content of the study programme "Marine Engineer").
- 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:** Partially compliant

- 1) All study materials (tasks, books, guidelines etc.) are available in English.
  - 2) Not all written descriptions of the study courses contain the following or containment is not full (as per Law on Higher Education Institutions). The relevant expert recommendations are set out in Section 2.2.1.
- 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:** Fully compliant

The sample of diploma complies with the Cabinet Regulations No.202, according to which state recognized documents of higher education are issued.

- 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:** Partially compliant

As it was observed that not all teaching staff members are proficient in the official language at a conversational level. Also in the Annex of SAR is the statement of NMC certifying that only a part of academic staff members fully complies with the requirements of the state language.

However, as the language of implementation of the programme is English, communication problems between the students and teaching staff do not arise, as all the teaching staff members are proficient in English.

- 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

During the on-site visit it was verified that all teaching staff members involved in the implementation of the study programme is proficient in English. The "MS Excel" document in the Annex of the SAR specifies the knowledge level of the English language of each academic staff member.

- 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

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

- 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

NMC has an agreement with Liepaja Marine College to provide students with opportunities to continue their education in another college in case of implementation of the NMC study programme has been terminated. Liepaja Marine College has a similar study programme for engineers, as well as full-time and part-time study programmes. Programmes are licensed, accredited and have certificates of conformity issued by the Ministry of 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

The NMC has confirmed that students are guaranteed compensation for losses if the study programme is not accredited or the study programme's license is revoked.

- 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

Overall programme is compliant with the requirements of the Section A-III/1 and reduced requirements of A-III/2 of STCW Code. As well as compliance with Cabinet Regulation No.710 "Regulations Regarding Certification, Implementation, and Monitoring of Professional Training Programmes for Seafarers" is approved and a certificate of conformity issued by the Ministry of Transport (No. 374, issued 08.02.0216.) confirms that.

However there are some recommendations regarding the programme`s documentation, implementation, infrastructure etc. described below in section 2.6.

### **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

The study programme mostly complies with the requirements of the Law on Higher Education Institutions where it is applicable and other binding regulatory enactments. However there is a need for slight improvements in the written descriptions of some study courses.

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

The study programme "Marine Engineer (41525)" is well grounded and complies with the relevant requirements of the Latvian legislation in the field of higher education and meets the requirements of the STCW Convention.

The processes of development and review of study programs are well organized and regulated by the NMC QMS procedure "Development, Inspection and Regular Inspection of Study Programs". An internal audit is carried out every year in accordance with the schedule in order to continuously check the content of the study program and study courses for compliance with the industry and labor market needs. If deficiencies / inconsistencies are identified during the audit, the director of the study program draws up a plan for how the content will be updated and agrees with the QMS specialist.

Nevertheless the slight improvements are required regarding the study course description (for closer information please look at the recommendations described in the Chapter.2.6.). Another area where attention should be paid is facilities for practical training especially for the full-time students. There are a number of skills that cannot be acquired in on-board environment due to impossibility to intervene in live systems, or lack of relevant systems or equipment on board (e.g., different aspects of operation and troubleshooting of hydraulic, refrigeration, electronic etc. systems) and which require a designated classroom, laboratory, workshop, or simulator on shore. This is the area where the experts can see the place for slight improvements.

## Evaluation of the study programme "Marine Engineer"

Evaluation of the study programme:

Good

### 2.6. Recommendations for the Study Programme "Marine Engineer"

#### Short-term recommendations

1. The study course descriptions shall be reviewed and where it is necessary appended with the relevant information as per Law on Higher Education Institutions. For instance, each study course description has to be appended with the description of organisation and tasks for the independent work of students and appended with thorough evaluation criteria of all learning outcomes.
2. NMC has to indicate all the infrastructure and technical equipment needed for each study course on the study course descriptions. Especially on the full-time programme there are practical tasks which must be conducted at laboratories, workshops (e.g., refrigeration laboratory, hydraulic laboratory, electronics laboratory, chemistry laboratory, mechanical and electrical workshops) etc. to provide the practical skills of students during the studies. The same recommendation refers to part time study programme as there could be situations where a student is not able or is not allowed to perform practical exercises on vessel's workshops, in this kind of situation College has to offer an opportunity for students to perform these practical exercises on its workshops.

#### Long-term recommendations

1. NMC should consider an opportunity to provide programme implementation in official language (Latvian), especially full-time programme, to give an opportunity to those teenagers who after graduation of high school do not feel proficient enough in English to study in English in all academic and professional study courses. An important nuance in this regard is that not all lecturers have an appropriate knowledge level of the official language.
2. NMC has to evaluate dynamics of the number of students and graduates. As statistics show, there are not enough graduates while the number of students is more or less constant. College has to take measures to motivate its students to do their studies according to the study plan of the programme, that is, 3 years part-time studies and 2 years and 10 months full-time studies.
3. The NMC should find way how to increase the involvement of the students and teaching staff in the scientific/creative work.

## 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	The college ensures continuous improvement, development, and efficient performance of the study field, implementing its internal quality assurance system, however involvement of external stakeholders (employers) are to be intensified.
R2 - Compliance of scientific research and artistic creation with the level of development of scientific research and artistic creation (if applicable)	Fully compliant		The applied research could be evaluated as fully compliant with the College and the study field.
R3 - The cooperation implemented within the study field with various Latvian and foreign organizations ensures the achievement of the aims of the study field.		Partially compliant	NMC has very strong cooperation with local institutions but not so strong with foreign organizations abroad. It should be improved.
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		All of the deficiencies have been eliminated and taken into account.

#### 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	Maritime Transport (41525)	Not relevant	Fully compliant	Fully compliant	Partially compliant	Good
2	Marine Engineer (41525)	Not relevant	Partially compliant	Fully compliant	Partially compliant	Good

## **The Dissenting Opinions of the Experts**

N/A