

JOINT OPINION BY THE EXPERTS GROUP ON THE ASSESSMENT OF A
STUDY PROGRAMME

STUDY PROGRAMME
Operation of Ship Power Plants

Maritime Institute of Postgraduate Education Named after
Rear Admiral Fyedor Fyedorovich Ushakov (AUMI)

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1. Summary

This report provides the results of the assessment of the bachelor's study programme in Navigation, implemented at Maritime Institute of Postgraduate Education named after Rear Admiral Fyedor Fyedorovich Ushakov (AUMI).

The evaluation of the quality of education in the field of navigation was carried out at the request of the AUMI. The visit was carried out in accordance with the existing procedure of programme evaluation of the Latvian Quality Agency for Higher Education (AIKA). The study process of the assessed navigation programme in the academic year 2020/2021 took place under conditions of the covid pandemic. The AUMI has introduced a number of measures to offset the negative effects of the pandemic on the quality of education. The expert team noted that they are of a temporary nature. The study programme has not been accredited before.

The visit was preceded by the familiarisation of the expert team with the self-evaluation report (SAR) submitted by the AUMI. The team also held organisational meetings to discuss the issues presented therein, matters requiring clarification with the AUMI authorities and a detailed schedule of the visiting process.

The visit started with a meeting with the management of the AUMI and reviewing of the AUMI infrastructure. Then on the following day, the visit was continued, meeting with the academic staff study programme, meeting with employers, visiting the infrastructure in Kherson seaport, meeting with the students of the study programme. Before the end of the visit, the degree of fulfilment of the criteria was assessed and recommendations were formulated.

The findings of the evaluation and the recommendations of the expert team are summarized in this report.

Economic and social grounds for establishing the study programme are based on the regional, national and international maritime industry needs and demands and, on the other hand, there are the needs of applicants for higher education (students) to award a bachelor's degree, which gives AUMI graduates the opportunity to pursue a management level position on board. Understanding of the AUMI mission and role in the region and in the maritime industry sector is clear enough. The AUMI management has an opinion and sees opportunities to ensure the availability, quality and sustainability of financial resources, using three sources: students' fees, short courses fees and crewing service inflows. The Institute has developed, implemented and maintains a quality management system in accordance with the requirements of ISO 9001: 2015.

AUMI has premises with the very good potential to improve and expand. The set of modern specialised simulators was upgraded in AUMI in February of 2021, is certified by the Maritime Administration and is widely used in the study process.

Study programmes, presented by AUMI for assessment, are developing in accordance with International Convention STCW requirements. But the programmes' content does not fully reflect the requirements of the Ukrainian National Qualifications Framework prescribing competencies of the first level of higher education (bachelor's degree) regarding bachelor's competencies as the ability of a person to solve complex special-purpose problems, application of certain theories and methods of relevant sciences should be visible and serve the purposes of

the high school.

The use of information and communication technologies in the implementation of the study programme in classes is insufficient, classrooms' computers not connected with the Intranet and the Internet, classrooms are poorly equipped with electronic demonstration devices (projectors or large LED screens).

The teaching staff is a mix of lecturers: acting and former seafarers, very experienced academic staff - professors (most of them started to cooperate with the Institute in 2019/2020 years). But most scientific publications are published in conference proceedings and on behalf of other institutions and as a sequence may be attributed to the person, but not to the AUMI. At that moment AUMI has not demonstrated available scientific or appropriate laboratory or equipment or any availability to access it. The expert team would like to recommend developing scientific work directions, creating appropriate research facilities and equipment, enhancing working groups, involving students, and attracting possibilities for additional financing. It is desirable to cultivate and develop institutional academic culture.

The assessment concludes that the programme has a potential for development although a number of challenges and shortcomings should be addressed. The recommendation of the expert group is to accredit programmes for two years - a term appropriate for the implementation of the necessary improvements and revisions.

2. Information about the assessment procedure (timeline, experts group, scope of evaluation)

The site visit (organized partly remotely) to get acquainted with the premises and equipment took place on April 23rd, 2021. The site visit (organized fully remotely) - additional demonstration of the equipment and interviews with the management, academic staff, students and employment representatives took place on May 5th - May 6th, 2021. The assessment was conducted by an international team of experts:

- Prof. Viktoras Senčila, Lithuanian Maritime Academy, (team chair);
- Mr. Arnis Križus, (team secretary, representative of employers);
- Prof. Janusz Uriasz, Maritime University of Szczecin;
- Mr. Vasyl Chornopyskyi, Precarpathian National University named after Vasyl Stefanyk, (student member);
- Docent Iurii Iarmolovych, National University "Odessa Maritime Academy".

The assessment was based on the following sources of information:

- Self-assessment report (SAR) and supplementary information provided by AUMI prior to the start of the assessment procedure;
- Additional information supplied by AUMI at the request of AIC prior to the site visit;
- Information gathered during the partly remote site visit on April 23, and the remote site visit on May 5th -6th from meetings with the top management of AUMI, the central administration and support staff, the study programme directors, teaching staff,

- students, and employer representatives;
- Additional information supplied by AUMI during the assessment procedure.

The assessment report is based on the analysis of the available information from the sources listed above, in-person and remote discussions of the expert team members, and consensus decisions of the expert team.

The assessment procedure of the bachelor’s study programme “Operation of Ship Power Plants” was based on ten defined criteria:

- Criterion 1. Strategy, aims and programme management;
- Criterion 2. Structure and content of the programme;
- Criterion 3. Teaching and learning materials;
- Criterion 4. Techniques and methods of educational activity;
- Criterion 5. Teaching staff;
- Criterion 6. Resources;
- Criterion 7. Research work;
- Criterion 8. Cooperation and internationalisation;
- Criterion 9. Employability of graduates;
- Criterion 10. Student services.

Each criterion was assessed according to the following evaluation scale:

- Excellent – no deficiencies in meeting the set criterion have been identified;
- Good – minor deficiencies in meeting the set criterion have been identified;
- Average – deficiencies have been identified in meeting a criterion, but they can be eliminated within a short period of time;
- Poor – significant deficiencies have been identified, and they cannot be eliminated within a short period of time.

Overview on the assessment of criteria:

Criterion 1. Strategy, aims and programme management	Average
Criterion 2. Structure and content of the programme	Average
Criterion 3. Teaching and learning materials	Average
Criterion 4. Techniques and methods of educational activity	Average
Criterion 5. Teaching staff	Good
Criterion 6. Resources	Average
Criterion 7. Research work	Poor
Criterion 8. Cooperation and internationalisation	Poor

Criterion 9. Employability of graduates;	Average
Criterion 10. Student services.	Average

3. General description of the Higher Educational Institution profile

Maritime Institute of Postgraduate Education named after Rear Admiral Fyedor Fyedorovich Ushakov or in short Admiral Ushakov Maritime Institute (AUMI) is a private higher education institution founded in 21.02.2000 with an aim to provide preservice and in-service training for seafarers working on the ships of Ukrainian and foreign shipping companies.

The geographical position of the Kherson region, the presence of a river waterway, the Black and Azov seas contribute to the development of water transport. Kherson and Skadovsk seaports and Kherson river port have connections with sea and river ports of the Black Sea countries. The city of Kherson is located on the Dnieper river, has a river and seaport, therefore according to the institute administration, AUMI educational programs offer training both specialists for the marine industry and river navigation.

Currently, Ukrainian law allows “junior specialists” to occupy positions of not higher than operational level officers on board a ship. The main idea behind the establishment of the bachelor's program, according to representatives of AUMI management, is to award a bachelor's degree, which gives graduates the opportunity to pursue a management level position on board.

The first enrollment of students for bachelor's programs was carried out in 2016. The first graduation took place in June 2019 for students who already had college-level education (level 5 according to ISCED) and corresponding qualification level “junior specialist” (according to Ukrainian law) before studies in AUMI and entered a reduced 3-year bachelor's program.

According to the information provided by the AUMI, the number of bachelors in all courses and all study programs is currently about 200 students.

In addition, the Institute continues its initial activities - organizes refreshing and professional upgrading courses for seafarers, currently implementing about 70 short-term programs, and carries out seafarers' employment (“crewing agency”) activities, which are also sources of finance for the Institute.

4. Strategy, aims and programme management

AUMI announced its mission, which is reflected in the Strategic Development Plan for 2017-2027, which is “training of new generation specialists for a marine industry in today's scientific and technological progress”. Strategic Development Plan is posted on the official website of the AUMI. It coincides with the educational programme goals because it assumes the final result - qualified graduate - Bachelor of Ship Power Plants.

Economic and social grounds for establishing the study programme are based on the regional, national and international maritime industry needs and demands. According to the BIMCO manpower report “The global supply and demand for seafarers in 2015” Ukraine is among the top-5 countries that supply qualified personnel to the international maritime labour market. These factors also contribute to the economic growth of the Kherson region. On the other hand, there are the needs of applicants for higher education (students) to award a bachelor's degree, which gives AUMI graduates the opportunity to pursue a management level position on board. Most of the students in the institute have a certificate of rating competence or a diploma of higher education for another speciality and the major part of students (90%) receive education on correspondence formation and in parallel work in the marine industry.

Educational programme management is based on the corresponding AUMI regulatory documents:

- Internal regulation for quality assurance;
- Program of measures to ensure the quality of the educational process and the quality of higher education in the private institution "Maritime Institute of Postgraduate Education named after Rear Admiral Fyodor Ushakov";
- Regulations on the formation, approval and updating of educational programs.

The procedure for internal quality assurance is as following:

- Applicants for education, employers submit proposals to change the content of an educational program component.
- A teacher examines the proposal, makes her/his own changes, comments, suggestions and submits it to the department.
- The department discusses the proposal, attracts a guarantor of the educational program, submits a proposal to the Academic Council.
- The Scientific Council takes a decision on approval or rejection of the proposal.
- The Rector approves the changes in the educational program.

The Department of marine specialists training of the AUMI bears responsibility for the implementation of the educational program. Other structural units of the Institute, namely the Department of humanitarian preparation, Department of Basic Training are involved in the implementation of educational programs as well.

As it turns out from the SAR and the interview, that monitoring of educational programs is carried out on an annual basis to determine the achievement of the set goal and compliance of job seekers, employers and other stakeholders needs providing surveys (questionnaire) of applicants of education (students), employers and other groups of the parties concerned.

The Institute has developed, implemented and maintains a quality management system in accordance with the requirements of ISO 9001: 2015. In November 2019, the group of Bureau Veritas Certification Ukraine conducted the first supervisory audit of the Quality Management System for compliance with the requirements of the international standard ISO 9001: 2015. The audit was successful, the Institute received a corresponding certificate.

SWOT analysis of the study programme is presented in the SAR as an annex, but does not provide a detailed analysis of the situation. The SWOT analysis is essential for improving the quality of the programme ensuring its sustainability. Table with key-performance indicators (KPI) is presented in the SAR. Set of KPIs aimed to periodically monitor daily, monthly or annual activities providing information on how the institution reaches its goals.

The admission to the AUMI is carried out by the Admission Commission, the composition of which is approved by the order of the Institute Rector, who is its chairman. The Admission Commission is valid according to the Regulation on the Admission Commission of the Institute approved by the Academic Council of the Institute in accordance with the Regulation on the Admission Commission of the Higher Education Institution, approved by the Order of the Ministry of Education and Science of Ukraine since October 15th, 2015 No. 1085, registered in the Ministry of Justice of Ukraine November 4th, 2015 to №1353 / 27798. The Regulation on the Admission Commission of the Institute is published on the Institute website.

Admission for training at the institute is carried out within the limits of licensed scope of the speciality 271 River and Sea transport (educational programs of navigation, the operation of ship power plants, the operation of ship electrical equipment and automation means) exclusively for the means of physical and/ or legal entities. Admission for training for the second (third) and subsequent courses is carried out within vacant places of licensed scope. To obtain a degree of higher education, the bachelor degree, persons who received a complete general secondary education or educational and qualification level of a junior specialist are accepted to the AUMI. To obtain a degree of higher education in another speciality, persons who have previously received the same or higher level or are receiving it at least for the period of one year and fulfilling the individual curriculum in full scope.

The expert team would like to make a general remark about academicism and the mission and vision of the Institute as a part of the higher education system. Ukrainian National Qualifications Framework prescribes competencies of the person for the seventh level of the Framework or first level of higher education (bachelor's degree) as following: “ability of a person to solve complex special-purpose problems and practical challenges in certain fields of professional activity or in the course of study, which solution involves the application of certain theories and methods of relevant sciences and is characterized by complexity and ambiguity of conditions”. It is hard to distinguish in the programme areas where theories and methods of science (transport) are being delivered and students in their turn demonstrate a weak understanding about the importance of providing education on next levels instead of main (only) focus on STCW convention.

The expert team would also like to make a few remarks on what is commonly referred to as academic culture reflected in attitudes, values and ways of behaving that are shared by people who work or study in institutions. Academic culture is reflected in many aspects: perception of the mission of higher education, institutional dress code, knowledge of foreign languages, behavioural traditions, quality of documentation, and so on. Academic culture needs to be improved. Among other things, it is reflected in the quality of the documents and the accuracy of the data presented.

Strengths

- Economic and social grounds for establishing the study programmes are presented clearly.
- AUMI announced the mission of the AUMI, which is reflected in the Strategic Development Plan for 2017-2027 years. Understanding of the institution's mission and role in the region and in the maritime industry sector is clear enough.
- Educational program management is based on the corresponding AUMI regulatory documents. Monitoring of educational programs is carried out on an annual basis, involving applicants of education (students), employers and other groups of the parties concerned; the processes are well documented.
- The Institute has developed, implemented and maintains a quality management system in accordance with the requirements of ISO 9001: 2015.

Weaknesses

- Low involvement of internal and external stakeholders in preparation of SAR (for instance teachers/ professors were not involved).
- SWOT analysis, as a widely applied tool for strategic planning, does not provide a detailed analysis of the situation.
- The programme content does not fully reflect the requirements of the Ukrainian National Qualifications Framework prescribing competencies of the first level of higher education (bachelor's degree).
- Institutional academic culture, reflected in many aspects such as the perception of the mission of higher education, institutional dress code, knowledge of foreign languages, quality of documentation, and so on needs to be improved.
- The institute website, at the list in English, requires updating of information and revision of supporting documents.

Recommendations for elimination of weaknesses and for further development

- Recommendation to implement Ukrainian National Qualifications Framework

prescriptions regarding bachelor's competencies as the ability of a person to solve complex special-purpose problems, application of certain theories and methods of relevant sciences should be visible and serve the purposes of the high school. One of the possible means for bachelors level may be, for example, preparation and public defence of graduate qualification work, in parallel to state examination.

- It is desirable to cultivate and develop institutional academic culture, understanding the importance of providing education for all levels of higher education, the focus should be not only on professional skills but also on soft skills development, encouraging staff to share appropriate attitudes and ways of behaving (for instance dress code, languages and so on).
- Recommendation to update periodically the AUMI website and keep on it only actual documents and valid certificates.
- Recommendation to perform a SWOT analysis as an element of quality assuring system regularly, seeking sustainability in improving the quality of the programme.
- Recommendation to develop a set of KPI that help AUMI to periodically monitor their daily, monthly or annual activities, providing information on how AUMI reaches its goals.
- It is recommended to build an own quality system/culture designed for academic purposes. The Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) might be a good indicator/model for AUMI.

Assessment:

Excellent	Good	Average	Poor	N.r.
		X		

5. Structure and content of the programme

Seafarers education and training should be carried out in accordance with the requirements and regulations of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), 1978, as amended, which sets minimum qualification standards for masters, officers and watch personnel on seagoing merchant ships.

Therefore in AUMI education and training of bachelors under the study programme “Operation of ship power plants” is carried out in accordance with the Convention STCW Section A-III / 1 “Specification of minimum standard of competence for officers in charge of an engineering watch in a manned engine-room or designated duty engineers in a periodically unmanned engine-room” and Section A-III / 2 “Specification of minimum standard of competence for chief engineer officers and second engineer officers on ships powered by main propulsion machinery of 3,000 kW propulsion power or more”.

For this purpose, the study programme provides for the study of disciplines such as Theory and structure of a ship and propulsion systems - to maintain a ship in a seaworthy condition, control ship's draft, control trim, stability and stress in the ship's hull, Ecology and environmental protection - to prevent pollution of the marine environment, Life safety and basics of labour protection - to ensure safe navigation, prevent fires, provide first aid, Marine boiler plants, Marine turbine plants - to perform normal watch duties in the engine room, Marine internal combustion engines - to operate, monitor and evaluate the operation of the engine, Ships auxiliary, cargo and deck mechanisms - for the management of fuel and lubricants, ballast operations providing and etc.

The graduation of specialists is carried out for part-time education after 4 years 6 months (in February) and after 3 years 10 months (in June) for full-time education. The volume of such a study programme is 240 credits. Also the AUMI, according to the rules of admission to AUMI, receives persons who already completed education and have qualification level "junior specialist" to the first year under the reduced program - 180 credits, duration of studies - 2 years and 10 months.

According to the Self-Assessment Report of the "Operation of ship power plants" study programme, 240 credits are provided for bachelor's degree training, of which 160.5 credits are provided for theoretical training, 78 credits for practical training and 1.5 credits for the state certification.

The internships (educational and production seagoing practices, at all 69 credits, it is less than indicated in the Self-Assessment Report) are incorporated into the curriculum of the "Operation of ship power plants" study programme as a part of the study programme. During the practice, students prepare a report and present a completed seagoing practice training record book. In the terms of content and total duration, the internship corresponds to STCW convention requirements regarding minimum standards of competence and approved sea-going service, aimed to meet the goals of the study programme.

The curriculum (schedule) of the "Operation of ship power plants" study programme has been prepared in tabular form, presenting the distribution of study subjects by courses and distribution of study hours between theoretical, practical and self-work, indicating the form of subject assessment is quite structured and clear, but still needs some clarifications.

Workshop practice is mentioned in the SER as a 6 weeks duration practice but is not distinguished in the AUMI presented curriculum. During visiting the factory, where workshop practice should take place, AUMI responsible representatives mentioned that the workshop practice usually takes 2 weeks. According to IMO Model course 7.04 OFFICER IN CHARGE OF AN ENGINEERING WATCH requirements only 3.1.6 part USE OF HAND TOOLS, MACHINE TOOLS AND MEASURING INSTRUMENTS must be at least 125 hours, not counting the other parts. There is no confirmation that workshop practice corresponds to IMO Model course 7.04 OFFICER IN CHARGE OF AN ENGINEERING WATCH part "Function 3: Maintenance and Repair" requirements by duration, content and training outcomes.

The "Operation of ship power plants" study programme does not contain information regarding STCW compulsory short courses (Fire prevention and fire-fighting, Life-saving, Medical aid

and so on). In this way, it is difficult to confirm the administration's statement that the courses are included in the program through study subjects.

The study subject "Bridge Team Management" (usually it is a course for the navigational simulator) is incorporated in the "Operation of ship power plants" study programme "Matrix for ensuring program learning outcomes" table and tied to the programme outcomes. At the same time the study subject "Engine-Room Resource Management" is not included in the "Operation of ship power plants" study programme. This study subject according to IMO Model courses 7.04 and 7.02 requirements should be included in the "Operation of ship power plants" study programme.

In accordance with the "Operation of ship power plants" study programme, AUMI students are not required to prepare the graduate qualification work. State certification of graduates is carried out in the form of a comprehensive state examination. The State Examination Commission/ Board is organized annually and operates during the calendar year. The examination card contains 10 questions of theoretical content and one practical task (technical calculations). AUMI uses documented procedures - guidelines for the preparation and implementation of a comprehensive state exam.

Strengths

- The study programme "Operation of ship power plants" development and execution are carried out in accordance with the Convention STCW Section A-III / 1 and Section A-III / 2 requirements, to ensure unrestricted certification and career possibilities of graduates on board a ship.
- The internships (seagoing practices) are directly incorporated into the "Operation of ship power plants" study program as part of the program. During the practice, students prepare a report and present a completed seagoing practice training record book.
- The "Operation of ship power plants" study programme and study plan of the educational process has been prepared and presented in tabular form with the distribution of hours between theoretical, practical and self-work, indicating the form of subject assessment is quite structured.

Weaknesses

- The curriculum of the "Operation of ship power plants" study program does not contain information regarding STCW compulsory short courses.
- Workshop practice is not involved in the curriculum. Information about workshop practice differs depending on the source of information.
- There are some undefined study subjects or unclear names in curriculum, for example "Стандарты международной морской организации". The International Maritime Organization does not develop standards and this name is not mentioned in IMO model courses.
- The study subject "Bridge Team Management" is incorporated in the "Operation of ship power plants" study programme "Matrix for ensuring program learning outcomes" table

and tied to the program outcomes, when usually it is a course for the navigational simulator.

- The courses Engine-Room Resource Management is not included in the “Operation of ship power plants” study program.

Recommendations for elimination of weaknesses and for further development

- It is highly recommended to visibly incorporate STCW compulsory short courses (Fire prevention and fire-fighting, Life-saving, Medical aid and so on) in the “Operation of ship power plants” study program as subjects or visible blocks of subjects.
- It is recommended to ensure that workshop practice to be respectively documented and involved in the study plan as a visible part of the program, reflecting IMO Model course 7.04 requirements by duration, content and training outcomes.
- It is recommended to ensure that the study subject “Engine-Room Resource Management” according to IMO Model courses 7.04 and 7.02 requirements to be included in the “Operation of ship power plants” study programme as a part of the program.
- It is recommended to review and revise the study plan, improving its accuracy and integrity.
- It is recommended to discuss the possibility to introduce graduate qualification work in the “Operation of ship power plants” study programme, in parallel to the state examination, as an element inherent in higher education for the formation of analytical skills.

Assessment:

Excellent	Good	Average	Poor	N.r.
		X		

6. Teaching and learning materials

According to the specifics of the speciality for quality study process teaching and learning materials must consist of three parts. The first is literature sources for the acquisition

of theoretical knowledge, the second - materials - technical support, the third - technical means for the implementation of special courses. Materials, technical support and evaluation of technical means should be done in the resources section, but based on the specifics of the speciality, the experts dared to partially analyze these components by adding them to the teaching and learning materials.

Scientist Council approved study programs according regulation: *”Положение о формировании, утверждении и оценке образовательных программ”*. Study courses and methodical guides are considered and approved at meetings of the Department of Marine Training. The process of developing and updating the teaching and learning materials takes place in accordance with AUMI regulations. Information acquired during the remote site visit confirmed that students and teachers are involved (at least nominally) in the development of the teaching materials. For example, students can suggest topics, literature, exercises, technical solutions for new ships or teaching formats to the teachers. Teachers, after evaluating such suggestions, can further recommend corresponding revisions in the course content and materials. This approach optimizes the quality of the teaching materials and their correspondence to the needs and requirements of both students and teachers.

The self-assessment report "Educational Program" link does not provide full information about the study course descriptions of the study programme. Upon additional request, information on study courses was provided. Overall, judging from the self-assessment report and additional information provided by AUMI and acquired during the evaluation visit, the quality of teaching materials is good and corresponds to the requirements of the program. The course descriptions and other materials available to the expert group were quite structured and clear but still needs some clarifications. As a critical remark, judging from the course descriptions and additional information provided by AUMI, some of the available teaching materials are based on outdated literature. A similar situation arose with methodological recommendations. According to the self-assessment report the link to the internships (educational and production seagoing practices) description available only for the study programme “Navigation”. A link to the methodical guide is provided in the SAR. Unfortunately, this link does not provide complete information. In addition to the given information, methodological instructions were provided, such as for completing the course work. The methodological recommendations of the qualification exam reflect in detail the requirements to be set, the range of questions, and the evaluation criteria.

Bridge and engine room simulators are developed and in general meet international requirements. Software licenses such as Navi_trainer Professional 5000 ver. 5.25 (2 activator keys), Engine Room Simulator ERS 4000, LCHS 5000 TechsIM, GMDSS Simulator TGS 5000 ver.8.2, GMDSS Simulator TGS 4000 ver.2.0, LCHS 2000 LCC Tanker Solo (2 copies), was issued 23.02.2021. For example, the Engine room simulator is used to acquire the skills of engineer and ETO for the control of various ships' machinery, to solve non-standard situations and various issues related to the control of the ships equipment. The recommended IMO model course 1.39 “Leadership and Teamwork” (STCW 78 as amended A-II/1, A-II/2, A-II/3, A-

III/1, A-III/2, A-III/3, A-III/6), as well as the supervising maritime education organizations, recommend to create one study course where the above-mentioned skills are acquired.

Laboratory equipment does not provide the acquisition of practical skills. An example: Electrical processes are modelled using various types of software, the operation of refrigeration equipment is modelled, and so on (as explained during the online meeting). Special laboratories are needed (for example: for the analysis of fuel lubricants and water) because by using them the student is able to acquire the necessary knowledge and skills, which will have to be applied in daily work on ships. Posters are mostly used in classrooms. They can be used as visual aids, but unfortunately, they are not able to provide full information on the structure, design and ongoing processes of the mechanisms. The lack of different measuring instruments reduces the effectiveness of training.

The group of experts was given the opportunity to inspect the facilities in the port area where students receive practical training. This type of training model is acceptable for the partial acquisition of practical skills. While in the factory or on board, the student training process is subject to the needs of the current factory or port (ship). This means solving specific tasks. The laboratory and educational practice included and planned in the study process cannot be fully realized.

The equipment of the training centre provides training using various types of teaching aids, such as different types of fire extinguishers. Diverse emergency situations are modelled on the premises of the training centre to fight the fire. A fully equipped lifeboat provides practical training in driving a boat. Rescue suit equipment meets the requirements. The use of life rafts is also considered a necessary component for the successful conduct of the training process.

Strengths

- Teaching and learning materials mainly correspond to the achievement of the required results;
- The equipment of the training centre ensures the successful acquisition of short courses;
- Availability of premises for placement of teaching materials and creation of workshops

Weaknesses

- There is a lack of mainly teaching materials for acquiring practical skills;
- Some of the available teaching materials are based on outdated literature;
- Difficult implementation of shore (educational) practice;
- According to the SAR the link to the internships (educational and production seagoing practices) description available only for the study programme “Navigation”;

- Methodological guides do not fully cover all study courses;

Recommendations for elimination of weaknesses and for further development

- In order to improve the training process, it is necessary to install premises with specific (according to the profession) equipment;
- It is recommended to attract cooperation partners and sponsors for obtaining training materials;
- It is recommended to establish a system of methodological guides;
- It is recommended to establish standards for the approval of teaching literature;
- .To secure a mechanism of monitoring and inclusion to the program current achievement of science and outputs of development work specific to study discipline;

Assessment:

Excellent	Good	Average	Poor	N.r
		X		

7. Techniques and methods of educational activity

As the fully independent activity of the educational institutions has started in 2020 there is no base for the teaching methods development comparison. The forms and methods actually used during the teaching processes are described in Cl. 2.3. of institution local regulation "Regulations on the organization of the educational process". For the moment they are mostly traditional, ineffective means of demonstration are used (the sets of posters, school blackboards and chalk). The grading system in accordance with ECTS requirements is applied. A 100 point grading system is in use too. Student's evaluation methods are described in the same document Cl. 2.5. Evaluation criteria are available for review on the institution website together with other didactic materials. Each subject of the educational programme consists of a list of exam questions. The coursework is planned, which provides for the implementation of the main navigation tasks. In general, the teaching methods are acceptable and ensure the learning process. Academic integrity principles set out in the SAR, Cl. 4. A program for checking works for plagiarism is recommended, a list of measures applied to the persons who violate the principles of academic integrity are indicated.

To take into account the opinions of stakeholders on the quality and content of study programs, the website provides a form, which includes a sender's address (<http://new.kmtc.com.ua>). The right to transfer students to other educational institutions, admission to study at their institute, transfer to other specialities is indicated according to Ukrainian legislation. The rules of these processes are stated in "Regulations of the organization of the educational process" Cl. 3.1

“Procedure for translation, deduction and renewal of higher education accessories”. The meeting with the students was attended by some who had previously studied in other educational institutions. There are regulations for the transfer of discipline results for such students. The procedures are described thoroughly and it seems that there is no problem with practical application.

E-learning is presented on Moodle electronic platform. It is possible to contact responsible teachers via Viber directly according to teaching staff information. It is allowed to perform tasks during a job at sea. A student-centred approach is released by possibilities to choose the individual trajectory of education (as stated in Self-assessment report, Cl. 1). In case of being late for the session, the student has the right to an individual schedule of exams. According to the teaching staff information, self-passing tests for self-control are available in classrooms. The institute's website contains test tasks and methodological instructions for performing practical works. A list of recommended reading is available in the classroom's computers with access to an electronic library. The opportunity to use professional literature stored in other libraries (electronic version) is possible, but only with a personal visit.

Exchange of students or wider mobility of students doesn't exist. AUMI understanding of the importance of mobility in higher education is very restricted. According to a Self Assessment report, the meaning of mobility is reduced to transferring students from one institution to another. It is something different. Of course it is good that the Institution can acknowledge competences (credits) gained in previous education however it still should create conditions for mobility and exchange of students by signing dedicated agreements with other higher educational institutions (national and international), assuming adequate procedures, providing information etc

Strengths

- Online/offline contact with students at sea using necessary means of modern communication.
- Possibility to access free bibliography resources from electronic sources.
- There is a possibility to adopt applicants from another institution of education taking into account the disciplines learned.
- Annual revision of programs is planned

Weaknesses

- Mostly traditional forms of education are used.
- Limited technical possibility to apply the modern forms of education.
- The library with which the institute cooperates is not focused on professional literature
- The own bibliography resources are limited.
- The form for recommendations and suggestions posted on the web site is not anonymous

Recommendations for elimination of weaknesses and for further development

- To implement modern forms and methods of education such as brainstorming, situational modelling, casing;

- To improve the presentation of educational material by using projectors, computer simulation.
- To indicate the timing of programs revision, including the teaching methods revision/updating.
- Organize an opportunity for authorized students to use professional literature remotely
- To develop syllabuses for study courses to make it easier for students to understand the course of the educational process.
- Student proposals are better to conduct in anonymous mode.
- Create conditions for mobility of students

Assessment:

Excellent	Good	Average	Poor	N.r.
		X		

8. Teaching staff

Procedures for attracting and/employing qualified teaching staff are well documented and formed as the Regulation on the competitive selection at the vacant position of academic staff and conclusion of their employment agreements (contracts). Among other provisions of the Rules there are requirements applicants to submit:

- a list of scientific works (for those who do not work at the AUMI - complete, for people working at the Institute, and shall be elected for the next term - scientific work issued during the previous period of work);
- a review of the open lectures (for applicants for the position of professor, associate professor and senior lecturer) or practical (seminary, laboratory) employment (for applicants for the position of senior lecturer, teacher and assistant of the department);
- an extract from a protocol of a Department meeting about the recommendation for election to position (served after receiving documents).

At the end of the academic year, the rating of scientific and teaching staff is determined according to the Regulations on the definition of the scientific and pedagogical workers ratings. Procedures for improving the qualification of teaching staff are given in the Regulation on advanced training and training of scientific and pedagogical workers. The SAR states that “each teacher has the right to choose a place and time required for training courses or internship; agree on these terms with the leadership of the Institute”.

The ratio of academic and research load of teaching staff is determined in accordance with a scientific degree, academic rank, position, level of qualifications, work experience, participation in a methodical, scientific and other types of work and are planned by research and teaching staff with the head of the department agreement. Four types of work are distinguished: educational, methodical, scientific, mixed organizational and educational.

The teaching staff is a mix of lecturers: acting and former seafarers, very experienced academic staff, professors - most of them started to cooperate with the AUMI in 2019/2020 years and other related teaching staff. Such a composition of teachers was positively assessed by students during the interview.

By information received from the AUMI, the staff of the AUMI is staffed completely. From the beginning of the educational training program, 14 scientific and pedagogical workers quitted on their own or for family reasons.

According to the additional information get from the AUMI regarding the “Operation of ship power plants” study programme, out of 160.5 credits, 37 credits (23%) are taught by professors - Higher Mathematics - 10 credits, Physics - 8 credits, Information Technology - 3 credits, Life Safety and Occupational Safety Fundamentals - 4 credits, Marine Internal Combustion Engines - 5 credits, Automation of ship power plants - 4 credits, Theory of automatic control - 3 credits, 83 credits (52%) fall on associate professors of departments and 40.5 credits (25%) are covered by lecturers.

Strengths

- Procedures for attracting and/employing qualified teaching staff, for the rating of scientific and teaching staff, for improving the qualification of teaching staff, for determining the ratio of academic and research load of teaching staff are well documented and formed as the appropriate regulations.
- The teaching staff is a mix of lecturers: acting and former seafarers, very experienced academic staff - professors (most of them started to cooperate with the Institute in 2019/2020 years) and other related teaching staff.
- According to the AUMI information, 23% of the “Operation of ship power plants” study programme is taught by professors, 52 % fall on associate professors of departments and 25% are covered by lecturers.

Weaknesses

- The most highly experienced professors joined the AUMI in recent years and are of honourable age that could be a matter of study process sustainability.
- A high turnover of staff was observed in the SAR.
- The possibility of using external and projects’ sources of funding mobility of teachers and their professional and academic development is not mentioned in the SAR.

Recommendations for elimination of weaknesses and for further development

- It is recommended to develop efforts and ways to attract and motivate highly qualified academic and professional staff to work at the AUMI, strengthening its status as a higher education institution.
- It is recommended to look for external and projects’ sources of funding mobility of teachers and their professional and academic development (for example joining the Erasmus+ program and so on).

Assessment:

Excellent	Good	Average	Poor	N.r.
	X			

9. Resources

The AUMI management has an opinion and sees opportunities to ensure the availability, quality and sustainability of financial resources, using three sources: students' fees, short courses fees and crewing service inflows. They state that financial resources provide achievement of certain educational program objectives and program learning outcomes as their planning is carried out prospectively, provided by the work plan of the AUMI, and adjusted at the end of each financial year.

The AUMI has premises with a total area of 2004.4 square meters, including classrooms, laboratories, computer laboratories, gym. Computer labs, specialized classrooms and laboratories of the department are actively used for conducting online lectures, practical and laboratory classes, students' self-work.

Engine Room Simulator ERS 4000 (12 working places) and Liquid Cargo Handling Simulator LCHS 2000 (2 places) and LCHS 5000 TechSim (3 places) simulators were upgraded in the Institute in February of 2021, are widely used and very useful for the study process. All equipment is certified by the Maritime Administration for the period until 08/03/2021.

The AUMI has its own not-too-big library containing a room with an open fund of books and publications and a room with computers, equipped with electronic book sources. According to the Agreement on cooperation between the AUMI and Kherson Regional Universal Library named after Oles Gonchar institution's students receive services on the use of library facilities and their technical equipment, the use of available Internet resources, consultations.

Communication technologies (Email, Viber, ZOOM) are used in the implementation of the study programme. The Moodle platform is used also for lectures, study materials spreading and students testing.

The AUMI website has the necessary information for students regarding study plans, announcements about the educational process and the schedule of the testing and examination.

The expert team also notes that some premises and the library rooms seem to need repair and computers need updating. The use of information and communication technologies in the implementation of the study programmes need to be improved, classroom computers should share the AUMI network (Intranet) and the Internet, classrooms in addition to posters need to be equipped with electronic demonstration devices (projectors or large LED screens).

Strengths

- AUMI management has an opinion and sees opportunities to ensure the availability, quality and sustainability of financial resources, using three sources: students' fees, short courses fees and crewing service inflows.
- AUMI has premises with the very good potential to improve and expand.
- Engine Room Simulator ERS 4000, Liquid Cargo Handling Simulator LCHS 2000 and LCHS 5000 TechSim simulators were upgraded in the Institute in February of 2021 and are widely used in the study process. All equipment is certified by the Maritime Administration.
- AUMI has its own library containing a room with an open fund of books and publications and a room with computers, equipped with electronic book sources. According to the Agreement on cooperation between the AUMI and Kherson Regional Universal Library.

Weaknesses

- Unfinished reconstruction of the main part of the AUMI premises. Library rooms seem to need repair and computers need updating.
- The use of information and communication technologies in the implementation of the study programme in classes is insufficient, classrooms' computers not connected with the Intranet and the Internet, classrooms are poorly equipped with electronic demonstration devices (projectors or large LED screens).

Recommendations for elimination of weaknesses and for further development

- Recommendation to find a possibility for the Institute library modernization, renovating the library premises and upgrading informational sources, taking into account IMO model courses (7.02 and 7.04) recommendations and the needs of the Institute as a high school.
- Recommendation to find financial funds and the possibility to improve the use of information and communication technologies in the implementation of the study programme in classes, connecting classroom computers to the shared network and the Internet and equipping classrooms with electronic demonstration devices (projectors or large LED screens).

Assessment:

Excellent	Good	Average	Poor	N.r.
		X		

10. Research work

The scientific work in AUMI is carried out in accordance with the “Plan of scientific work of the Maritime Institute of Postgraduate Education named after Rear Admiral Fyedor Fyedorovich Ushakov”, considered by the Scientific Council of the Institute and approved by the Rector of the Institute. “Plan of scientific work for 2021” is available on the Institute website.

AUMI presented a table with seven institute scientific work directions, 3 of them carried out by the Department of Maritime Specialists Training:

- assessment of the possibility of applying physical models to the tasks of shipping;
- informational decision-making technologies;
- hybrid systems on transport.

According to the inquiry, the institute provided information about the publications of the program teachers during 5 years, which contains 8 articles, mostly in conference proceedings, published during the 2016-2019 period.

The student Zverev Viktor (221 group) of the educational program “Operation of Ship Power Plants” who together with the teachers of the Institute participated in conferences and has publications. The article was not included in the AUMI presented list of publications.

During the interviews with the Institute representatives, it became clear that the Institute does not apply the requirements for the periodicity and level (inclusion of publications in scientific bases) of academic staff publications. Therefore most publications are published in conference proceedings and on behalf of other institutions and as a sequence may be attributed to the person, but not to the Institute. Some lecturers hold the positions of associate professors (docents) without any publications at all.

No facilities or research equipment were not presented during visiting AUMI, although some intentions of the AUMI administration to relocate some related equipment from other places have been mentioned.

Strengths

- The scientific work in AUMI is carried out in accordance with the plan of scientific work considered by the Scientific Council of the Institute and approved by the Rector of the Institute. “Plan of scientific work for 2021” is published on the Institute website.
- AUMI determined institute scientific work directions. There are some first signs of scientific working with students.

Weaknesses

- The Institute does not apply recommendations or requirements for the academic staff publication periodicity and level (inclusion of publications in scientific bases). Some lecturers hold the positions of associate professors (docents) without any publications at all.
- Most scientific publications are published in conference proceedings and on behalf of other institutions and as a sequence may be attributed to the person, but not to the AUMI.
- At that moment AUMI has not demonstrated available scientific or appropriate laboratories or equipment or any availability to access it.

Recommendations for elimination of weaknesses and for further development

- Recommendation to develop scientific work directions, creating appropriate research facilities and equipment, enhancing working groups, involving students, attracting possibilities for additional financing.
- Recommendation to prepare and apply a document enhancing academic staff scientific work publishing, reflecting recommendations (or requirements) for the academic staff publications periodicity and level.
- Recommendation to find a way to manage scientific publishing process, enhancing write articles on actual for the Institute themes and articles attribution to the institution.
- Recommendation to

Assessment:

Excellent	Good	Average	Poor	N.r.
			X	

11. Cooperation and internationalization

The AUMI shows some signs of Internationalization by establishing first contacts with foreign partners/institutions. One good example could be a membership in the International Chamber of Commerce. It is understood that due to the short history of the Institute the scope and depth of international cooperation is relatively small. It has also been relatively restricted by pandemic Covid-19 recently.

The programme is internationally recognized incorporating international standards established by the International Maritime Organization in the Convention on Standards of Training, Certification and Watchkeeping for Seafarers known as the STCW convention. The most visible side of internationalization is a professional practice that students often undertake on foreign ships. It is additionally strengthened by staff members who in many cases possess professional maritime qualifications and worldwide practice.

However, the academic level of education which AUMI provides shall be based also on academic internationalization which is not visible. AUMI is lacking cooperation with academic higher institutions, research centres and developing centres. AUMI doesn't have effective tools and mechanisms for exchanging students and teachers. The ability to communicate in foreign languages of administration, teachers and students is on a low level. Offered programmes are not based on the current achievement of science and outputs of development work. AUMI at least shall monitor activities in these areas and outputs transfer to own education.

The cooperation with the local (regional) economic environment is in a quite good shape. Mainly they consist of crewing agencies, companies, training centres and public services. However, those partners shall be much more included in programme design, shaping learning outcomes, evaluation of competencies. It shall be also developed in a formal manner (agreements, standardized communication).

Strengths

- Openness for participation in international programs.

Weaknesses

- Lack of academic internalization.
- Students are not involved in cooperation and internationalisation activities.

Recommendations for elimination of weaknesses and for further development

- Start cooperation with the national and international academic higher institutions, research centres, developing centres.
- Secure tools and mechanisms for exchanging students and teachers.
- Secure communication competencies in foreign languages of staff and students at least on level B2 of Common European Framework of Reference for Languages for internationalization purposes.

Assessment:

Excellent	Good	Average	Poor	N.r
			X	

12. Employability of graduates

During the accreditation visit, the expert group managed to find out that the goals of the educational program take into account regional peculiarities. In particular, the city of Kherson has access to the Black Sea, there are several seaports, which is very important in the practical training of students. Existing ports in the city of Kherson carry out constant economic activity. However, AUMI partners mainly - crewing agencies. The majority of students (approximately 90%) study part-time and are already employed in the maritime field. This indicates that students are aware of the choice of this particular educational program.

During an online meeting with employers, it was found that they are involved in the development of the educational program and have the opportunity to influence its content as needed. In particular, the amount of workload of lectures or practical classes, the scope and direction of practice, etc. Employers also stated that they hire students with a score of at least 4. However, in general, according to employers' words, the level of knowledge of students/ graduates has become lower and they have to hire students/ graduates with a lower score.

In 2019, the AUMI developed "Regulations on monitoring the quality of education and educational activities." This provision includes such key components as the regulatory

framework, the content of stakeholder monitoring, the procedure for conducting a stakeholder survey, methods for evaluating survey results, as well as sample questionnaires for students, graduates and employers.

Strengths

- Communication and cooperation with employers and stakeholders is established
- Most students have a prior college education and they work during their studies.

Weaknesses

- Some employers believe that the knowledge level of graduates is gradually declining (the middle point in many cases are lower 4)
- The AUMI partners are mainly crewing agencies. While maritime consists also from other actors: maritime administration, owners, shipyards were not present as partners.

Recommendations for elimination of weaknesses and for further development

- Develop partnerships with more different actors

Excellent	Good	Average	Poor	N.r.
	X			

13. Student services

The analysis of the SAR and the meeting with the students makes it possible to state that the communication between the students and the administration of the AUMI regarding the educational process takes place primarily through the education department. In particular, the training department provides up-to-date information on classes, practice, necessary documents, etc. The department of education is a place where students can resolve conflict situations, report corruption, etc. At a meeting with the AUMI administration, it was found out that the announcement of sessions and other key events, especially for part-time students, is officially sent via mail, and modern Viber-type messengers, that are used for faster communication.

Students also have the opportunity to learn the necessary information through AUMI's website. However, an analysis of the site's pages shows that some pages need refinement. Students noted during the meeting that feedback from the institute also takes place through surveys, which are conducted approximately once a year and include questions about the educational process, practical training and the work of the AUMI as a whole.

The rights of students are protected by an established and functioning body of student self-government. For this activity, the "Regulations on student self-government" is developed and implemented.

Strengths

- Organizational support for students through the study department of the AUMI.
- The student government protects the rights of students.
- The administration conducts regular surveys on the content of educational programs and the quality of education.

Weaknesses

- Insufficient information content on the website.

Recommendations for elimination of weaknesses and for further development

- To develop and improve information about the educational process on the website.

Excellent	Good	Average	Poor	N.r.
	X			