# RE-ACCREDITATION OF THE FACULTY OF MARITIME STUDIES UNIVERSITY OF RIJEKA

Date and place of site visit: 23 and 24 April 2012, Rijeka

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## **INTRODUCTION**

#### Short Description of the Evaluated Institution

The Faculty of Maritime Studies of the University of Rijeka is the leading higher education institution in maritime studies in the Republic of Croatia, as the oldest and the biggest Faculty in the domain of maritime affairs in the country. It is also the oldest component of the University in Rijeka, established in 1978 as the University Department of Maritime Studies. In 2001 the University Department of Maritime Studies was merged with the College of Maritime Studies, established in 1949, into the Faculty of Maritime Studies. The Faculty has the specific position in the budget of the University because it is highly multidisciplinary and demands funds for providing expert and navigational practice on certain sections of the undergraduate university studies. For that reason, special care has been given to gaining Faculty's own income, especially having in mind that in the last few years, on the level of the entire system, it has not been possible to find the substitution for the costs of studies, until recently paid by students. The Faculty has in this regard given special attention to economy development projects and maritime feasibility studies.

Of particular importance is the cooperation not only with the Ministry of Science, Education and Sports, but also with the Ministry of Maritime Affairs, Transport and Infrastructure of the Republic of Croatia in the domain of meeting all the requirements stipulated in international conventions relating to the watch officer authority and engine and electronic officers concerned with vessel navigation and propulsion systems.

The Faculty of Maritime Studies has harmonized its university studies with the principles of Bologna Declaration in 2005 introducing the three cycles of studies. Study programs for undergraduate and graduate studies are: Nautical Studies and Maritime Transport Technology, Marine Engineering and Maritime Transport Technology, Marine Electronic Engineering and Information Technology, Technology and Organization of Transport, Logistics and Management in Maritime Industry and Transport.

The Faculty is also responsible for the postgraduate inter-university scientific PhD programme "Maritime Studies", the only study of its kind in Croatia. It is composed of nine modules, meaning study orientations: Nautical Sciences, Marine Power and Engineering Systems, Electronics and Maritime Communications, Information Technologies in Maritime Affairs and Transport, Logistics and Management in Maritime

Affairs and Transport, Hydrographic Engineering, Port Systems, Sea and Coastal Protection and Naval Systems. One of the specialties of this Faculty is that through the module on Military and Maritime Systems it is possible for the members of the Croatian Navy and Coast Guard to obtain the PhD in the domain of military – maritime sciences. Another important activity is the continuous development and improvement of seafarers' professional education programmes as well as lifelong education programmes, which allow the candidates to acquire competency certificates.

The Self-evaluation states that the Faculty of Maritime Sciences is intended to be the centre of excellence, in Europe and worldwide. This could be achieved through specific and competitive existing programs, as well as with new study programmes, exchanges of students, professors, academic and administrative staff, common international expert, study and scientific research projects.

The Faculty intends to continuously improve the education of maritime officers (deck and engine officers) for Croatian shipping companies, European and global market, and experts in navigation and maritime technology, ship engineering and maritime transport, technology and organization of traffic, logistics and management in maritime affairs and transport, intermodal/multimodal transport, electronic and computer technologies in maritime affairs.

The Faculty is organized into different structural units: institutes, department sections, laboratories, centres, library and professional facilities. Institutes may establish subordinate organizational units: departments and laboratories. The management structure of the Faculty is organized according to the Faculty Statute. It is composed of: the Dean, Faculty Council and other bodies defined by the Statue and the Ordinance on the Internal Organization and Organization of the Workplaces at the Faculty. Four Vice Deans support the Dean's work. The Faculty Council is the main expert body of the Faculty. The Dean is chosen by the Faculty Council, and confirmed by the Senate of the University.

The Faculty Council brings the decision about admission quotas for each academic year, and the Senate of the University accepts it, or delivers it to the integral element to be accepted. In the year 2010/2011 the Faculty had 1.719 students enrolled and 32 teachers appointed into scientific grades, 13 in teaching grades, and 31 into associate grades. The total number of teachers is 76, so according to the Self-evaluation the proportion of the students to one teacher is 22,62 (1.719/76). In the last five years, the trend is approximately the same, but the number of teachers in scientific-teaching grades is increasing in comparison to the number of teachers appointed only to teaching grades. The structure of the workload of teachers and part time teachers shows that most of the obligations are done by the teachers employed by the Faculty full-time, and general participation of part time teachers is below 15 % of teaching.

The Faculty works in the building built 1899/1900 under the title of the Big Trade Academy, so its original purpose was education, as well as it is today. The building is under the protection of the Ministry of Culture as valuable historic, architectural heritage of the Republic of Croatia. The Faculty is registered at the Commercial Court in Rijeka as the owner, and it has a total surface of 7.200 m<sup>2</sup>. It has been planned to enlarge the spatial capacities of the Faculty in the following period. Since 2011, the Faculty can also use the space of the Rijeka Port with the total surface of 600 m2, and it is used as the practicum for navigation and safety at sea. During 2010 and 2011, the Faculty invested its own funds in developing and equipping the laboratory, classrooms and establishing wireless internet. The Faculty has its own training park with a sailing boat and two open life – boats, two closed fire – resistant and water proof life boats.

# Description of the methodology

For its work the panel drew upon the self-evaluation report, prepared by the Faculty of Maritime Studies of the University of Rijeka. The panel carried out a site visit to the campus of the Faculty on 23 -24 April 2012.

Dr. Dimitris Konovessis was not able to participate in the site visit, but he was involved in preparations for the site visit as well as in the process of drafting the final report. During the visit the expert panel held meetings with the following groups:

- Faculty Management Board
- The Self-Evaluation Group and the QA Committee
- Department Heads
- Teaching Assistants
- Students
- Heads of Study Programmes (undergraduate, graduates, professional and postgraduate)
- Leaders of research projects.

The panel also examined the facilities and classrooms at the Rijeka campus and visited a few classes, in one of which they held a brief question and answer session with the students. Based on the available evidence, the expert panel drafted final report and sent it to the Agency for Science and Higher Education on: July 3<sup>rd</sup> 2012.

# DETAILED ANALYSIS BASED ON STANDARDS AND CRITERIA FOR RE-ACCREDITATION

#### 1. Management of the Higher Education Institution and Quality Assurance

- 1.1. The Maritime Faculty is a component of the University of Rijeka and its main mission is to organize studies on all three levels as well as to perform scientific research activities in the multidisciplinary domain of maritime affairs. The Vision of the Faculty is in the domain of maritime affairs, traffic and logistics, i.e. in management of supplier chains in the process of transport. The institution does conduct strategic planning in order to maintain its leading position, but it is not sufficiently systematic and the stakeholders are not involved sufficiently (which might be partly caused by the current state of the affairs in the commercial sector, with many Croatian companies in this sector cutting costs). However, the Faculty has a clear idea of the jobs they are primarily educating their students for, and the way in which their institution should develop.
- 1.2. The main decision-making body of the institution is the Faculty Council (consisting of 39 teachers and 7 students), while the management consists of the dean and four vice-deans. The Faculty is divided into five departments (responsible for main activities, i.e. study programmes) and three chairs (responsible for supporting activities, e.g. language teaching), managed by department heads and chairs. The institution has formalized all organizational processes, most documents are available both in Croatian and English, and the organizational structure is clear and well-known to everyone involved.
- 1.3. Faculties in Croatian universities are legal entities with wide autonomy, especially financial. However, the faculty statute has to be in accordance with the university statute and the faculty strategy needs to be adopted by the university Senate after a university committee establishes that it is in line with the university strategy, and that was the case with the Maritime Faculty.
- 1.4. Most study programmes offered by the institution perfectly fit to the Faculty mission, but there might be a problem with the programme of Logistics and Management in Marine Industry and Transport, which seems to be a bit out of place as the only undergraduate program at the Faculty not directly educating seafarers and thus not producing a qualification readily recognizable by the global labour market.

1.5. Present study programs of the Maritime Faculty have been established in 2005, i.e. at the beginning of the implementation of the Bologna reform in Croatian universities, and have remained basically unchanged during the following seven years, regardless of the development of the Croatian Qualifications Framework (CROQF).

The Faculty is just starting to think about the learning outcomes and fitting their qualifications to the CROQF, and they are planning to do that while revising new study programmes. Therefore, we expect this to be fully implemented in the future.

1.6. All maritime higher education institutions in Croatia have implemented two quality assurance systems. In addition to the academic QA system based on European Standards and Guidelines (ESG) and monitored by Croatian Agency for Science and Higher Education, there is also ISO system required by International Maritime Organization (IMO) and monitored by the Croatian Ministry of Maritime Affairs, Transport and Infrastructure. The academic QA system consists of a QA committee at the Faculty level, and the QA committee on the University level, as well as the QA ordinance and manual.

The Maritime Faculty has an effective ISO system, and complies with the IMO regulations regarding workshops, but needs to work on the overall academic quality, improve the system of sea service (practice) and better fit the two systems together. The institution is just starting to introduce incentives for research and teaching excellence.

- 1.7. The formal mechanisms for monitoring and improvement of the teaching quality are established in line with the national regulations. They are described in the QA ordinance and manual and implemented regularly. However, **they should be further developed so that the data collected through student evaluation of teaching can be used for quality enhancement.**
- 1.8. The formal mechanisms for monitoring and improvement of the research quality are established in line with the national regulations. They are described in the QA ordinance and manual and implemented regularly. However, there are no additional incentives for successful researchers.
- 1.9. The Faculty has established the Board for Ethics, but also the Faculty Management, having in mind that any research involving students has to be approved by the Management. Ethical aspects have been encompassed by Ethical code. In practice, there have been no ethical problems managed by the Board for Ethics, nor mentioned by students or teachers.

1.10. Ethical code has been published so that the students and teachers are well informed on the rules of ethical behaviour.

## 2. Study Programmes

2.1. Alumni of navigation and marine engineering programmes do not have any problems with employability. Croatian as well as European markets are in need of the maritime engineers. There is only a problem with the employability of graduates from the programme in Logistics and Management in Maritime Industry and Transport. The institution stated that they will be employable in the future, but the current situation indicates that the enrolment quotas should be revised.

## The problem should be checked during the next years by internal audits.

- 2.2. The Faculty manages to carry out the necessary work, but they should get funds for additional teachers, as the existing staff is overloaded with educating a profession highly demanded by the labour market. Another problem is **the internal mobility of teachers and not an attractive salary for teachers with IMO diplomas - who could potentially teach at maritime studies.**
- 2.3. The Faculty has implemented very rudimentary learning outcomes, and they are currently working on their further development. The problem should be checked next years by internal audits. The biggest problem is a balancing act of keeping the same high level between the academic and the practical profile; namely, maritime faculties have to simultaneously meet the professional regulations for practical education of seafarers (STCW convention *Standards of Training, Certification & Watchkeeping*) and the high academic standards expected by the roatian regulations and the Qualifications Framework.

## Attention needs to be devoted to both of these.

- 2.4. Again, since the learning outcomes are not yet fully implemented, these criteria should be paid more attention to in the future. The problem should be checked next years by internal audits. Audits should be implemented side by side with the representative of the Croatian marine authority in order to keep the high quality of teaching and supervision of the maritime practices of students.
- 2.5. The institution does not offer ECTS for internships in companies, and there is some imbalance in determining workload the institution should do some fine

tuning and distribute the workload more fairly, particularly regarding the same courses on different programs.

The problem should be solved immediately. The problem should be checked next years by internal audits, which should, as already mentioned, in this and similar issues also involve representatives of the Croatian maritime authorities tasked with monitoring the implementation of the STCW convention.

- 2.6. Regarding the maritime subjects, the recognition is fully guaranteed by the professional regulations on the area of workshops (by the International Maritime Organization) and as such this profession is the example of excellence in this regard; however, these might not be perfectly fit with the Croatian Qualifications Framework and IMO regulation related to the sea service (practice), and more work should be done in this regard. Another problem is the lack of engineering courses related to the virtual design, engineering graphics and static and dynamic load modelling - FEM (Finite Element Modelling). Academic Profile for Marine Engineering should ensure that such a course is introduced. It is also necessary to prepare the minimum academic program for navigation, the ETO and mechanical engineering in accordance with the STCW Convention to ensure the high, academic level is reached. Finally, there is no clear regulation linking rules of the academic authorities (the Ministry of Education and the Agency) and the maritime authorities regarding re-accreditation of maritime studies. As already mentioned, the Faculty in addition to courses required by the STCW Convention provides knowledge, skills and academic competences.
- 2.7. Students were mostly satisfied by the teaching methods even though they said that the methods varied with each professor, so **this issue should be looked into more systematically**. Although students do not complain about the teaching methods, it is difficult for them to evaluate the methods because they do not have anything to compare them to, as there is little student mobility.
- 2.8. The Faculty can work further on the e-materials, and the system should be technically improved by the management of the University. Another problem is the limited access of students to professional software intended for engineer level. Modern CAD / CAM software is not only an instrument for the designer and the constructor but also for the user and the operators of the vessel. Similarly, there is the same problem of simulation software for navigation, which should be a standard tool supporting work on board.

- 2.9. Students should have much more opportunities for internships and practical work on board and/or in the laboratories and companies, particularly those from the program in logistics. Several Croatian maritime companies are national so one of the solutions should be made mandatory for students taking the practice by companies. This is also in the interest of the HE Ministry.
- 2.10. The procedure of adopting new study programmes has been stopped for 5 years and is now formally re-established, however, **the institution does not fully involve stakeholders and this should be changed.**

## 3. Students

- 3.1. The information packages (web pages, brochures, leaflets etc.) are available to potential students. These communication tools are used to clearly inform students about the level of the programmes (such as ECTS points, weekly schedule of classes and assignments), qualifications and academic titles as well as possibilities for further education and employment. Application for the enrolment was made by the Croatian Agency for Science who publishes the faculty's programmes and a call for the enrolment was made in the press and on the official web page of the faculty. The official web page and printed materials provide information about the programmes, modules, courses of study, academic titles, and equipment of the faculty, bologna process and rules of studying. The students where very satisfied with the information packages offered to them.
- 3.2. The admission criteria and procedures are publicly stated and consistently applied. They are regularly reviewed for their effectiveness in predicting student success in a programme.

## It is recommended that the Faculty should do more regarding analyses.

- 3.3. The Faculty tests competencies of applicants in regard to their future career. There are additional points for those from the maritime high schools, who might be less advanced academically, but they are also more certain to really become seafarers according to the faculty; they also consider the State Matura procedure to be overtly general, however, **the standards of the Matura system are rising and are expected to improve for this kind of professional studies.**
- 3.4. The Faculty is supportive of the students' extracurricular activities including sports (Students' association *Mornar* and Students' rowing Association *PFRI*),

cultural activities (Students' association *POM-F-RI*.), and among the others student magazine *Plima*.

# It is recommended that the Faculty offers more research grants to the students.

- 3.5. The students seem very content with the availability of professors for counselling and mentorship. The professors are available in form of personal tutor through the weekly schedule which is located on the bulletin board, via e-mail available on the official web pages of the Faculty. Students may use different forms of support: student ombudsman, Student Counselling Centre, mentors, student mentors for different departments).
- 3.6. The institution is not responsible for the student standard, which is within national and university competences, and this criterion is thus not applicable.
- 3.7. Students are organized in Student Council on the level of the University and on the level of the Faculty; they have the President of Faculty's Student Council, his deputy and Student ombudsman of the Faculty. All years of study have elected student representatives and their deputies. There is also one student of the Faculty who is a member of the Senate of the University in Rijeka as the representative of the postgraduate students.

The Faculty fully supports the Student Council and the Council receives 10% of the Faculty's own income.

3.8. The Faculty publishes its methods and procedures for student assessments and uses various methods for student monitoring. The students confirmed that they regularly received teacher's feedback and that they had the possibility of appeal to their exam results.

It is recommended that all assessment procedures should be further analysed to determine their variation and effectiveness in checking the achieved learning outcomes.

- 3.9. The Faculty keeps statistics on the employability of its graduates. Data from the Employment Service for the past 5 years shows that the earlier enrolment quotas for undergraduate studies were justified, meaning, there were very little unemployed students. A certain numbers of students that have finished undergraduate studies have continued education on graduate studies of the faculty, while the certain number has gone abroad on domestic and foreign shipping companies.
- 3.10. The Alumni have organized several interesting career-related seminars intended to increase employment opportunities for current students. The Faculty and the

Alumni Association organize the annual Career Day of the Faculty. There is a special link for alumni on the web pages of the Faculty.

It is recommended that these activities should be done more systematically, so that they are able to formally ensure that the Faculty keeps contact with at least 20% of Alumni and connects them with the current students in order to provide internships and similar forms of cooperation.

3.11. Students of the Faculty participate in the activities of the Faculty Council, undergraduate students make 10% of total number of Council members, and the postgraduate students make 5%. Students equally participate with the other members of the Faculty Council in its work, except in the procedures of obtaining masters' degrees and Ph. D. degrees, elections of the nominated in the honorary title professor emeritus and elections concerning scientific and teaching vocations. Students participate in the work of the Council in an expanded number, while discussing the issues of special meaning for the students. Student representatives participate in the activities of all committees that in some manner deal with the students' issues (plan and program revision, managing the quality control, disciplinary committee, awards, accomplishments, etc.). The students also have their representatives in the Committee for Managing and Promoting Quality. The Committee has 5 members, and one of the members is the representative of the Student Assembly. However, the students feel that they are not always perceived as equal members of these bodies, and that their opinions are not always fully taken into consideration.

# It is recommended that they participate on more equal footing in the quality committees and other bodies.

- 3.12. The institution regularly informs the public about its study programmes, learning outcomes, qualifications and employment opportunities, and publishes materials printed and online both in Croatian and English.
- 3.13. Students can express their opinions and propose improvement on regular basis, and there are also student surveys.
- 3.14. However, students are not introduced to the results or implemented measures on the basis of the surveys, and they have no formal way to make sure that their opinion is taken into account.

It is recommended that the Faculty introduces the students to the results of implemented measures based on the survey because in that way the students can feel that their opinions are significant.

#### 4. Teachers

4.1. On the maritime courses, the qualifications of teachers are excellent regarding the institutional goals and the coverage of the core disciplines; the problem is that the number of teachers might be too low in order to ensure the full quality necessary to work in small groups, and the institution should be allowed to employ more teachers. The qualifications of teachers have to be in line with the two criteria, academic and professional level. The second criterion is related to STCW certification that is connected with practise and experience of seafarers. In the same time the minimum standard for theoretical lessons is that the teacher has the doctor of science degree. In reality it is very hard to find teachers with both criteria so the Faculty has to have a clear policy about new staff in the future. The lack of teachers has significant influence on quality of practical lessons that can be done only by teachers/seafarers with STCW certification.

It is recommended that more academic staff is recruited with STCW certifications.

- 4.2. The institution has clear policies of growth and development of human resources, especially taking into account potential retirements and sustainability of study programmes and scientific activity, however, the policies at the university and ministry level (external circumstances) determining rules and funds should be improved so that they take into account the high employability of the graduates of this institution, and award more funds to hiring staff.
- 4.3. The institution did everything in its power to employ the sufficient number of teachers, but funds for new employment should be increased, as stated above. Also, the institution supports younger staff in postgraduate education but it lasts too much and is not compatible with professional specialization of seafarers, crucial for practical teaching. Namely, because maritime studies in Croatia are also academic, future teachers in this field need to acquire both practical qualifications (STCW management level) and a PhD. Because it takes years of seafaring experience to acquire the necessary practical qualifications, the scientific career is usually started later in life, and thus prolonged due to external circumstances. There are few positive examples of young scientists starting a professional carrier after acquiring the doctoral degree. In that sense maritime faculties could develop a specific strategy in education of their staff, stimulating them for seafaring by offering incentives, such as additional pay. It is not impossible because such career could be very attractive and challenging.

Domestic ship companies could take an important role in such a strategic approach.

It is thus recommended to the institution to exchange adequate staff for practical lessons with maritime companies/stakeholders.

In a new regulatory framework by the competent authorities we also expect a more precise definition of professional and university studies and their relation.

4.4. The ratio between students and full-time teachers is high, especially if we count only teachers holding teaching titles concerned with practical lessons.The institution is closely monitoring the teacher-student ratio, but, to

stress this again, they need more funds to further increase the quality.

4.5. The policies for development of teaching staff can be further improved in order to enable them to participate in lifelong learning, and the effectiveness of such policies should be analysed. Teachers should be more involved in didactical education, particularly in the creation of e-learning materials. Possibly a significant amount of student preparation hours can be carried out through distance instead of face-to-face teaching lessons.

It is recommended to the institution to ensure e-learning education for number of teachers through e.g. ELA (E-Learning Academy) organized by CARNET (Croatian Academic and Research Network). They will be capable for production of e-learning materials and some of them can be educated for e-learning tutors, particularly the younger teachers, as this form of education is likely to become an important component of studies in the future.

- 4.6. There is no possibility to appeal to the procedure of teachers' advancement, but there is a possibility of starting a court procedure however, this is fully regulated at the national level and cannot be influenced by the Faculty, which duly implements the national regulations.
- 4.7. The teachers seem content with the current distribution of the workload, although, as already mentioned, they all have big workloads without receiving extra remuneration for overtime work. The policies governing the assignment of teachers' workloads are generally fair between teachers but they do not pay adequate attention to the balance between teaching and research. It causes the pressure on the teachers in maintaining and developing their research outputs. Also, it stops them in scientific advancement.

It is recommended that the institution carefully monitors the balance between time for teaching and research. 4.8. As stated above, the teachers seem content with the workload distribution, however, although already quite burdened, **they have had outside obligations at other faculties, and this should be taken into account more carefully.** 

## 5. Scientific and Professional Activity

- 5.1. The Faculty of Maritime Studies is a research faculty that has established research profile, centres of excellence, collaborative research, institutional care for the development of scientific careers and increased science production. It is the leading Croatian research institution in the multidisciplinary area of maritime affairs and it conducts various national and international research projects. The institution monitors quantitative indicators of research productivity as required by national regulations; however, there are no significant consequences for research of outstanding (or low) quality. The common research strategy of the Faculty should receive more attention, and collaborations etc. should be further institutionally coordinated and encouraged.
- 5.2. The Faculty includes researchers from other institutions in its research projects, in accordance to its leading role in the field. We can say that the cooperation with other institutions is present, but primarily on individual basis, and not **systematically encouraged nor provided for by the institution, as it should be.**
- 5.3. The institution is aware of the importance of research, and it supports its researchers in participating in conferences. It also organizes various international conferences (e.g. during 2011 it has organized five of them). However, as already mentioned, there are no other formal incentives which would support successful researchers financially or otherwise and there should be more support for students' research activities.
- 5.4. Every year the Faculty Council evaluates the work of the teaching assistants according to the written reports of their mentors appointed by the Faculty Council on the suggestion of departments or chairs. The institution strongly supports its young researchers; however, again, **it could introduce further financial incentives for their success.**
- 5.5. Information about the scientific and development projects of the Faculty is published on the web pages of the Faculty. They plan to develop a library system

which will continuously follow the publishing, but currently the Faculty lacks resources for that activity, because the library has only two employees.

While the institution does have a spirit of research excellence, it does not formally provide incentives apart from co-financing projects and conferences.

- 5.6. The Faculty encourages publishing in highly ranked scientific journals by providing complete logistical support. Scientists with extraordinary results are indirectly rewarded with, among other things, promotion which provides them with higher income. It must be emphasized that there was intensive activity on improving the level of the Faculty's own journal *Pomorstvo*. In 2011, the evaluation procedure was started for including the journal in the SCI bibliographic database. **In addition to this journal, the institution publishes textbooks, and supports publications of articles in international journals, but does not offer further incentives for high-quality publishing.**
- 5.7. The Faculty monitors and encourages research activities of its teachers. It is also involved in collecting and analysing data on the University level in Rijeka. At the time of the site visit, results were analysed on three levels of the Faculty's bodies. Teachers have to provide publication data to the IRB Croatian Scientific Bibliography. In this way, the institution keeps track of the research productivity and collects evidence of it; also, all colleagues are well informed on each other's publications.
- 5.8. The impact of the results of professional and development projects and services on the development of the domestic economy, service sector and state administration is visible through the realization of the projects that improve and promote infrastructure, safety, development of maritime economy in Croatia, as well as local communities. At the same time, the Faculty has never appeared as unfair competition to the business subjects on the market. On the contrary, the institution has implemented applied research projects with a significant scientific and development component.

The institution should invest more funds into buying additional equipment for laboratories and modern software; particularly, they lack software support for some segments of professional work, such as mathematical and statistical software which should be available to students, as well as additional equipment for dedicated maritime courses.

## 6. International Cooperation and Mobility

- 6.1. The institution is willing to foster mobility of students with other institutions, and there are students coming from undergraduate programs at other institutions, but **more should be done in this regard as currently their number is quite low**.
- 6.2. Students do have opportunities for international mobility via Erasmus, however, only few of them are currently abroad (three students in Slovenia), and **they should be more encouraged.**
- 6.3. The teachers are also aware of their international opportunities, but few use them and they should be further encouraged in order to do this on a regular basis only one staff member took a postdoc abroad in the recent period.
  The Faculty has stated this in its self-evaluation, and we hope to see results in the near future.
- 6.4. The institution is a member of relevant international associations, such as the International Association of Maritime Universities and The Royal Institute of Navigation, and actively participates in projects funded by NATO and other international organisations. It is also organizing international conferences, such as the "GNSS Vulnerabilities and Solutions" and IMLA 19 in 2011.
- 6.5. The institution has large potential for attracting students from abroad, but they are currently not used, and **the institution is well advised to simply implement their current plans for introducing lectures in English as soon as possible.**
- 6.6. The institution participates in the Erasmus segment of the EU Lifelong Learning Programme, but **they have no incoming students or teaching mobility within it because of problems with accommodation and other issues not fully in the control of the faculty; the advice from 6.5. also applies here.**
- 6.7. The institution is participating in various European projects, such as Framework projects, Tempus and other funds connected to professional projects. However, efforts should be increased in this regard, especially in the area of motivating the faculty and providing incentives for participation in such projects, as well as orchestrating the efforts on the institutional level.

## 7. Resources, Administration, Space, Equipment and Finance

- 7.1. The institution might need more space, and it is planning to acquire it by improving the existing building. However, although they have the necessary simulators and a training vessel, the Faculty does **not have a laboratory where the students could work on real electronics and mechanical equipment, which are truly necessary to train students, and the teachers' competences are already sufficient to work with students on them. The Faculty holds that students will have work opportunities on real equipment as cadets, but this can never make up for training on real equipment which can be freely experimented with.**
- 7.2. The institution might need more space, and it is planning to acquire it by improving the existing building. However, although they have the necessary simulators and a training vessel, the Faculty does **not have a laboratory where the students could work on real electronics and mechanical equipment**, **which are truly necessary to train students**, and the teachers' competences **are already sufficient to work with students on them**. The Faculty holds **that students will have work opportunities on real equipment as cadets**, **but this can never make up for training on real equipment which can be freely experimented with**.
- 7.3. The institution is very systematic in providing further training for its non teaching staff, which was confirmed during the site visit.
- 7.4. The equipment is good, but **should be improved regarding IT technologies** (acquiring the necessary software and making it available to students) and laboratories for electrical & mechanical engineers, as discussed in the chapter on study programmes and scientific activity.
- 7.5. The comment under 7.1 applies to the technical equipment.
- 7.6. The institution does collect information relevant to improvement of its activities, but **it is questionable if they fully make use of it, and if they fully involve stakeholders.**
- 7.7. The library needs more space, and there might be **need for additional computers for students' use.**
- 7.8. The teachers and students had little complaints about administrative support provided to them, which indicates that they have a sufficient number of non-teaching staff.

- 7.9. As the institution is publicly owned, its financial stability is not an issue; however, as already mentioned, **it might invest further funds into raising its own quality.**
- 7.10. The institution buys equipment from its own funds; however, students complained that it is overtly used for life-long learning courses which provided funds to buy it in the first place.

The institution will do better to use more of its own funds to employ new staff and buy additional equipment for students' use.

# FINAL REPORT AND RECOMMENDATIONS BY THE EXPERT PANEL FOR THE ACCREDITATION COUNCIL OF THE AGENCY FOR SCIENCE AND HIGHER EDUCATION

## STRENGTHS

## Institutional positioning

General institutional positioning, its relations to the labour market, its strategy, mission, and the status of the centre of excellence in Croatian maritime studies are all highly commendable.

## **Academic Staff**

The qualifications and competences of the staff at the institution are excellent, both academically and professionally.

## **Support for Students**

The institution provides good support to students in their extra-curricular activities.

## WEAKNESSES

### **Program quality**

The institution did not change the study programs at all for years, although, contrary to their belief, minor changes were possible. Currently the management declares there will be changes of programs and this is very positive. While changing the programme, workload should be moved from overtly burdened first two years to the third year. In connection to this, the Bologna process is not fully implemented, regarding the ECTS distribution and the development of learning outcomes – the programs should be developed bottom-up, not the other way around as it is currently done. Assessment and teaching methods should be adapted to the learning outcomes, as soon as they are developed. There is not enough practice on real equipment and simulators for students.

### Support to researches

There is a lack of systematic, financial incentives for successful researchers, which could be introduced. The system should be so arranged that the best researchers, including the young ones, are financially awarded for devoting more of their time to research, instead of other, potentially more profitable activities.

## Laboratories

As explained in the report in detail, the institution should do more to improve its laboratories and acquire new ones, in addition to the existing, well-equipped simulators, and acquire additional software necessary for research, as well as teaching.

# **RECOMMENDATIONS FOR IMPROVEMENT OF QUALITY**

# 1. Management of the Higher Education Institution and Quality Assurance

It is recommended that the institution:

- systematically involves stakeholders in improving the programs and practice
- reviews the program in logistics and management, particularly with regard to the employability of graduates and the alignment of the program with the mission of the institution
- considers the learning outcomes and fitting to the CROQF, as planned while revising the study programs
- improves the system of sea service (practice) on both levels.

# 2. Study Programmes

It is recommended that the institution:

- proceeds to implement the reduction in enrolment quotas in logistics and management and formalises these in its plans
- ensures that the learning outcomes included in the programme documents focus on the outcomes expected from the CROQF
- offers ECTS for internships in companies
- makes sure that the programs perfectly fit with the local qualifications framework and IMO regulations, particularly regarding practice
- provides practice on real equipment and simulators for students.

## 3. Students

 It is recommended that the institution offers more research opportunities to students, including financial support.

## 4. Teachers

It is recommended that the institution:

- solves the problem of teachers' overload
- recruits more academic staff with qualifications to support teaching with onboard skills (STCW certifications)
- exchanges adequate staff for practical lessons with maritime companies/stakeholders

- pays more attention to the balance in the teachers' work between teaching and research
- pays more attention to didactical education, particularly in the development of e-learning materials.

# 5. Scientific and Professional Activity

It is recommended that the institution:

- establishes formal incentives which would support successful researchers financially
- invests more funds into buying additional equipment for laboratories and modern software.

## 6. International Cooperation and Mobility

• The institution is recommended to participate more fully in the Erasmus programme.

# 7. Resources, Administration, Space, Equipment and Finance

The institution is recommended to:

- improve the quality of laboratory where the students could work on real electronics and mechanical equipment
- ensure more space for the library.