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## Master Shipping & Transport Rotterdam University of Applied Sciences

Report of the limited programme assessment  
15 & 16 April 2024

June 2024  
[www.AeQui.nl](http://www.AeQui.nl)  
*Assessment Agency for Higher Education*

## Colophon

### Programma

Rotterdam University of Applied Sciences  
Rotterdam

Master: Shipping & Transport

Location: Rotterdam

Mode: fulltime, parttime

Croho-number: 70213

### Panel

Ronald Stevens, chair

Albert Veenstra, member

Gerrit van Leunen, member

Maarten Peels, student member

Yvet Blom, secretary

The panel was presented to the NVAO for approval.

The panel assessed on the basis of NVAO Framework  
2018

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## Summary

On 15 and 16 April 2024 a panel of AeQui visited the Master Shipping and Transport (MST) at Rotterdam University of Applied Sciences (RUAS). The panel judges that the overall quality of the programme meets the standard.

### Intended learning outcomes

The MST (60 ECTS) is a unique maritime master programme, offered in full-time and part-time mode. The programme aims to educate professionals to become practical-minded 'middle managers' for the maritime sector. MST professionals possess extensive knowledge of operational processes within maritime logistics, ports, terminals, and shipping. Additionally, they possess the expertise and skills to find innovative solutions to maritime challenges.

The MST is part of the Rotterdam Mainport Institute (RMI) and affiliated with RUAS' Centre of Expertise HRTech (CoE HRTech). The RMI is established by RUAS and the STC Group (Shipping and Transport College). Originally offered by the STC Group, the programme's license was transferred to RUAS in the academic year 2021-2022.

The programme's competences and intended learning outcomes align with industry and international standards and professional field expectations. The intended learning outcomes however are not clearly described in the educational profile. The panel advises RUAS to include these descriptions and to fully explain the connection between the competencies and the intended learning outcomes in this profile.

The programme sets itself apart with its broad orientation in the areas of shipping management, economics and finance, supply chain management, and transportation laws & policies. The panel suggests that the MST could strengthen its positioning further by adopting a specific

distinguishing element, such as a focus on sustainability or a chain approach (operations).

MST has a powerful network consisting of the port of Rotterdam, transport and logistics companies in Rotterdam Groot-Rijnmond, and lecturers of the 'Smart Logistics and Maritime Innovation' lecture-ship cluster of the CoE HRTech. The connections with the professional field are strong. They could however be further formalised. For example by more structurally embedding meetings of the professional field, including alumni in order to evaluate the link between the intended learning outcomes and industry needs.

The panel establishes that the programme meets this standard.

### Teaching learning environment

The competencies of the MST are translated via BoKS into learning objectives per module. Both variants follow the same competencies and offer the same curriculum in terms of content. The programme focuses on developing knowledge of operational processes in the maritime sector. Students work on real-life maritime cases, develop reflective skills and learn to make strategic decisions.

The learning environment is based on the didactic principles of knowledge-, research-, and student-driven education. The MST curriculum underwent several changes in the years following the transfer from the STC Group to RUAS. The changes consist of restructuring the programme, integrating small modules into larger units and strengthening the focus on developing research skills.

The panel commends the programme for its strong emphasis on research. The STC Group and later RUAS have successfully followed up on the recommendations from previous assessments regarding the research component. Both the research line and the thesis line prepare students to become practice-oriented master level professionals. The panel suggests to broaden the scope of research cases in the research line by including cases from both CoE HRTech and professional field partners. Additionally, the panel suggests increasing the visibility of lectors to students to enhance students' understanding of the lectors' roles and research activities.

The panel considers it positive that MST has included a personal development line in the curriculum. The personal development line is meant to define the onboarding period, and to shape students' personal and professional development. To the panel's satisfaction, from 2024-2025 MST will invest in team building and getting to know each other, learning to deal with different cultures, and assignments to better guide students' personal and professional development. The panel recommends to further develop the personal development line by linking the personal and professional development activities to the learning outcomes and assessing students as such.

RUAS applies appropriate admission criteria that align with the competencies students develop throughout the programme. The programme management has determined that students sometimes have varying expectations about the MST at the start of the programme. The panel advises adding a personal interview to the intake procedure in which students' expectations can be adjusted where necessary.

The MST has a team of passionate and expert teachers, each holding at least a master's degree and possessing a background in the maritime field. Students speak highly of the support they receive

from their teachers and commend them for their extensive industry knowledge. Furthermore, students find the teachers to be friendly, approachable, and flexible.

The panel establishes that the programme meets this standard.

### Assessment

The assessment policy and the system of assessment are adequate. Students are supported in their learning process through formative feedback moments. Each module is finalised with a summative assessment. The number of assessment moments has been significantly reduced in the new curriculum by merging the individual modules into larger units. The reduction of assessment moments has lowered the assessment pressure among students.

Students have a clear understanding of the competencies, BoKS, and learning objectives they need to demonstrate. The panel recommends specifying each competency in terms of behavioral indicators, to clarify which behaviour belongs to the intended competencies. Moreover, specifying competencies in terms of behavioural indicators will enable MST to strengthen the personal development line.

The quality assurance system of MST is adequate. The quality of assessment and grading is monitored through calibrations and the four-eye principle. The examination board also carries out random assessments on theses to check the quality of assessment and the final level. The panel believes that the examination board should take a more proactive role in ensuring the quality of assessments and the final level. For example by also reviewing the (content-related) results of midterms and calibrations.

The panel establishes that the programme meets this standard.

### Achieved learning outcomes

The panel establishes that the theses of the MST have been realised at the intended master's level. The panel recommends MST to consider shifting from the thesis as final examination to working on one or more professional products, allowing students to demonstrate their ability to apply research.

Both professional field representatives and alumni are satisfied with the knowledge and skills covered during the programme. The professional field representatives indicated that the graduates' level of thinking and work fit well with what their organisations' need. Professionals who have completed the MST apply the knowledge and skills gained during the programme on a daily basis.

The assessment was carried out according to the schedule presented in attachment 2. The programme has made several developments, based on the results of the former assessment. The panel considered these developments as an integral part of the current assessment.

The panel has assessed the programme in an independent manner; at the end of the visit, the chair of the assessment panel presented the initial findings of the committee to representatives of the programme.

All standards of the NVAO assessment framework are assessed positively; the panel therefore awards a positive recommendation for the accreditation of the programme.

On behalf of the entire panel,  
Utrecht, June 2024

Ronald Stevens  
Chair

The panel establishes that the programme meets this standard.

### Recommendations

In order to bring the programme to an even higher level of quality in the future, the panel issues the following recommendations:

- Intended learning outcomes - Include the intended learning outcomes in the educational profile and fully explain the relationship between the competencies and the intended learning outcomes.
- Behavioural indicators – Specify each competency also in terms of behavioural indicators. Behavioural indicators clarify which behaviour belongs to the intended competencies.
- Intake procedure - Incorporate the matching in the enrolment procedure, to manage students' expectations regarding the content and set-up of the programme.

Yvet Blom  
Secretary

## 1. Intended learning outcomes

### Findings

With the MST, Rotterdam University of Applied Sciences (RUAS) educates professionals to become practical-minded 'middle managers' for the maritime sector. During the MST, students gain knowledge on operational processes in the field of maritime logistics, port, terminal and shipping and learn how to find innovative solutions to maritime issues. There is also a focus on developments within the maritime sector. Developments related in particular to innovations and laws and regulations on issues of sustainability and safety. Important skills of MST professionals are working together in (international) teams, analytical thinking, strategic advice and leadership.

The MST was introduced in 2007. Initially offered by the STC Group (Shipping and Transport College), the MST only had a full-time variant until 2011. Since 2011, the MST has been offered both full-time and part-time. The STC Group and RUAS established the Rotterdam Mainport Institute (RMI) in 2012 with the aim of jointly offering bachelor's and master's programmes in the areas of shipping, shipbuilding, ports and logistics. In the 2021-2022 academic year, the STC Group transferred the licence for the programme to RUAS.

The need of the professional field for master-level maritime professionals who stay in the region after graduation has been the reason for transferring the licence. The enrolment under the STC Group averaged 15, mostly international, students per year. RMI and the professional field noticed that many of the graduates left the region after finishing the programme. RMI wanted to focus more on attracting Dutch students to increase the chances of MST graduates staying in the region. The transfer of the STC Group to RUAS resulted in the

desired effect of attracting more students (from an average of 15 per year to more than 60 by 2023).

The MST is part of the RMI and affiliated to RUAS' Centre of Expertise HRTech (CoE HRTech). The CoE HRTech conducts practice-oriented research for the sustainable use of raw materials and energy in Rotterdam's port industrial complex (HIC). Practice-oriented research within the MST takes place in close cooperation with one of the three lecture-ship clusters of the CoE HRTech, which is 'Smart Logistics and Maritime Innovation'.

### *Intended learning outcomes*

The educational profile lists the competences that are the focal point of the MST. The competences are taken from the 2015 STC Competence Profile. The STC Competence Profile was written together with national and international organisations in shipping, logistics and transport. The competences are defined in terms of a Body of Knowledge and Skills (BoKS). RUAS has aligned the competences in matrices with the descriptions of the master's level as laid down in the Dublin descriptors and the Professional Master standard of the Association of Universities of Applied Sciences. The competences students must master to successfully complete the MST are:

**Researching** – The graduated student can set up and conduct research concerning actual problems in the logistics and maritime sectors. They can identify profound research topics and use research methods by international academic standards for applied research.

**Analysing** – Equipped with maritime and logistics knowledge, the graduated student can write a comprehensive report and create a scientific-based analysis using tools to analyse a data set.

**Advising** – The graduated student can give in-depth advice for a company or institute's management level to make an informed decision, even with limited time or data availability.

**Manage** – The graduated student can execute projects within intercultural and multidisciplinary teams. The maritime and logistics manager's study pace and work strategy are adequate for executing his tasks.

**Influencing** – The graduated student can use their personal and professional skills to connect to and influence the key stakeholders in the maritime and logistics industries and are aware of the (inter)national and ever-changing environment in which they are employed.

RUAS left the competences unchanged after the transfer from the STC Group. This decision was primarily based on a labour market needs assessment, which indicated that the MST competencies align with industry expectations. RUAS and the STC Group have drafted a letter of agreement stipulating that RUAS will not alter the competencies, intended learning outcomes, and curriculum until September 2023.

The panel noted in its discussion with the programme management that the intended learning outcomes are not clearly described in the educational profile. The students and alumni with whom the panel spoke however, did have a good understanding of the intended learning outcomes.

#### *Education programme renewal*

In 2022, RUAS decided to reform the curriculum in phases. The reason for the educational reform was a substantial increase in the number of students and lecturers, and the recommendations from previous programme assessments to focus more on developing research skills. By 2022, some minor adjustments had been made to the curriculum. One of the adjustments consisted of restructuring

the curriculum to create a clearer link between maritime practice, skills and content. In the 2023-2024 academic year, the curriculum of the full-time variant was completely revised. In 2024-2025, the curriculum of the part-time variant will be fully re-designed.

#### *Profiling*

The aforementioned labour market needs assessment included research on how the MST compares with other maritime studies in the Netherlands and Belgium. The research revealed that there are no comparable programmes in the Netherlands and Belgium. The programme distinguishes itself from other maritime studies because of its focus on practice-based research on operational processes within maritime logistics, port, terminal and shipping. The MST is also distinctive because of the broad knowledge students gain with regard to the four domains: shipping management, economics and finances, supply chain management and transportation laws & policies.

#### *The professional field*

In the panel's discussions with both programme management and the professional field, it became clear that the MST has a powerful connection with the maritime industry. MST's network includes the 'Smart Logistics and Maritime Innovation' lecture-ship cluster of the CoE HRTech, the Port of Rotterdam, and transport and logistics companies in Rotterdam Groot-Rijnmond region. Representatives of the professional field indicated to the panel that there is a great need for the type of professional that RUAS are preparing. Professionals who thoroughly understand the maritime sector and can come up with innovative solutions to maritime issues based on available data. In addition, it is important that this type of professional can provide solid strategic advice. The need for this type of professionals arises partly from developments in the maritime sector. Examples of such developments are changes in technologies, and laws and regulations aimed at improving sustainability and safety. RUAS holds periodic (informal) consulta-



tions with the professional field representatives about the needs from the maritime sector.

RUAS has also established a professional field commission for the MST to keep the learning outcomes up-to-date and relevant. The professional field commission advises RUAS on the relevance of the competences and content of the master's degree, among other things.

#### *Students and alumni*

Current students and alumni are content with the competences covered during the MST. Students indicated in the panel discussion that one of the reasons they chose RUAS' MST was to (further) develop as 'middle managers' within the maritime sector. The connection RMI has with the port of Rotterdam and the logistics sector is another frequently mentioned reason why students specifically choose RUAS's programme.

#### *International perspective*

In the maritime sector, topics such as globalisation and international partnerships are important. RUAS prepares students for careers in both the national and international maritime sector. During the programme, there is a focus on (inter)national developments within the maritime sector through studying international literature and best practices from other countries.

#### **Considerations**

The panel finds the MST is a unique and relevant programme. The MST is specifically aimed at professionals who want to (further) develop in 'middle management' positions in the maritime sector. The programme's competences and intended learning outcomes are in line with the sector, international standards and the expectations of the professional field.

The panel notes that the intended learning outcomes are not clearly described in the educational profile. The panel advises RUAS to include these descriptions and to fully explain the connection

between the competencies and the intended learning outcomes in this profile.

The MST positions itself as a unique maritime master's with a broad orientation in the areas of: shipping management, economics and finance, supply chain management and transportation laws & policies. The panel feels that the MST could position itself (even) more strongly by choosing a specific distinguishing element. A distinguishing element in which the master's social focus is highlighted. For example, a profile in the area of sustainability or a chain approach (operations).

The panel is positive about the MST's network. The network consists of the port of Rotterdam, transport and logistics companies in Rotterdam Groot-Rijnmond, and the lecturers of the 'Smart Logistics and Maritime Innovation' lectureship cluster of the CoE HRTech. The MST is strongly focused on the organisations within its network. RUAS thus serves a regional field of activity, operating both nationally and internationally. The panel notes that there is a focus on international developments within RUAS. The panel advises to enhance the international focus.

The professional field representatives and lectors regularly provide RUAS with up-to-date and relevant information from the maritime sector. The panel finds the connection with the Rotterdam port, transport and logistics organisations, and the lectorate cluster strong. The connections with the professional field could be further formalised. For example by more structurally embedding meetings of the professional field, including alumni, in order to evaluate the link between the intended learning outcomes and industry needs.

The panel states that RUAS offers a unique and relevant programme with the MST. The MST is located in an important logistics hotspot within the maritime sector. The programme's competences and intended learning outcomes are in line with



the expectations of the professional field and (international) standards.

Taking these considerations into account, the panel establishes that the programme meets this standard.

## 2. Teaching learning environment

### Findings

The MST is a 60 ECTS programme that can be undertaken both full-time (1 year) as well as part-time (2 years). The competencies of the MST are translated via BoKS into learning objectives per module. Both variants follow the same competencies and offer the same curriculum in terms of content. The programme focuses on developing knowledge of operational processes in the maritime sector. Students work on real-life maritime cases, develop reflective skills and learn to make strategic decisions. Full-time students spend three days a week at the campus, part-time students one day every three weeks. In-person study days include (guest) lectures, tutorials, (extra-curricular) workshops, excursions, and self-study. Students keep track of their personal and professional development in a portfolio.

### *Learning environment*

The learning environment is based on the didactic principles of knowledge-, research-, and student-driven education. Knowledge-driven education is aimed at students acquiring and applying knowledge, concepts and methods. Research-driven education is geared towards teaching students to apply research to solve real societal problems. Student-centred education puts the student at the centre of learning. Students have a great deal of responsibility for their own individual learning process. This implies that the focus in the curriculum has shifted from the transfer of knowledge to the student's learning process.

### *Curriculum reform*

The MST curriculum underwent several changes in the years following the transfer from the STC Group to RUAS (see standard 1). The curriculum reform can be divided into three phases: the restructuring, revision full-time variant, revision part-time variant.

### *Phase 1 - the restructuring*

The first phase commenced the second year after the transfer, in 2022-2023. In that year, some minor changes were made in both variants (full-time and part-time). The changes were aimed at restructuring the programme by structuring it through four learning lines and four thematic blocks. More attention was also created for students' personal development.

The thematic blocks are Maritime Supply Chain, Shipping Companies, Strategy & Management, and Thesis. Full-time students complete the blocks in 10 weeks, part-time students in 20 weeks. The four learning lines run (horizontally) through the thematic blocks. The learning lines are : a knowledge line, a research line, a thesis line, and a personal development line. The knowledge line focuses on the Maritime Supply Chain, Shipping Companies, and Strategy & Management. The research line focuses on learning how to conduct research on real maritime challenges. Students work in small groups on research cases linked to ongoing research of the CoE HRTech. The thesis line consists of conducting an actual case-based research project. The personal development line focuses on students' personal and professional development.

### *Phase 2 - revision full-time variant*

In 2023-2024, phase 2 started. The most notable differences between the old and the new curriculum are the number of ECTS per module and the amount of time spent on research (skills). The old curriculum consists of 'separate' modules of 2 to 5 ECTS. In the full-time curriculum, the separate modules are integrated into larger educational units.

Students of the full-time variant follow 4 modules per block (1 module per learning line) during the first 3 blocks. The modules (8 ECTS per module) are: Maritime supply chain (block 1), Shipping companies (block 2) and Strategy & Management (block 3). During the modules, students acquire general knowledge about shipping management, logistics and transport, economics and finance, transport law, management skills and research skills. They learn to apply this knowledge by analysing a real-life maritime challenge and formulating an advice on the outcome. The research modules (6 ECTS per module) are: Research case Supply chain, Research case Shipping, and Research case Innovation. During the research modules, students conduct research on practice-oriented issues linked to ongoing research of the CoE HRTech. The personal development module (4 ECTS in total) includes developing skills in communication and teamwork.

Students start as early as block 1 with the thesis module (15 ECTS). Block 1 is dedicated to teaching research skills, which students can immediately apply in the research case. Block 2, 3 and 4 of the modules consist of setting up and conducting a Master's degree-worthy maritime research project. Students can choose to carry out the research individually for an organisation within the maritime sector and write a thesis on a self-selected research topic. They can also choose to contribute to a (large-scale) existing research project of, for example, the lectorate cluster 'Smart Logistics and Maritime Innovation'.

To successfully complete the thesis module, students conduct a research cycle. The research cycle teaches students to go through the different phases of a research project step by step. The first step consists of creating a research question based on a stakeholder analysis. Next, students have to prepare a research proposal (step 2), conduct a qualitative or quantitative analysis (step 3), learn to analyse results (step 4), learn to draw and

substantiate conclusions (step 5), and present the research in a thesis (step 6).

Discussions with lecturers, students and alumni revealed that the reform of the full-time curriculum is still in progress. The students and alumni the panel spoke with are generally satisfied with the programme. The panel noted that students make an important contribution to the programme's development by offering RUAS good and critical advice. Students and lecturers reflect on their experiences both during and after each block. RUAS implements, where possible, (smaller) changes during the programme. Teachers and programme management have indicated that they will make larger changes in the 2024-2025 academic year. An example of a larger change is the fine-tuning of modules in the knowledge line. Students sometimes find it unclear how the skills and required knowledge, match with the examination (see standard 3).

#### *Phase 3 - reform part-time variant*

Next academic year (2024-2025) will be the start of phase 3. In this phase, the curriculum of the part-time variant of the MST will be revised. The new curriculum is flexibly designed so that part-time students, many of whom regularly work abroad (at sea), can be working on developing their skills anywhere in the world. The curriculum consists of large units of 15 ECTS per block (each block lasts 20 weeks). Students are expected to develop their skills and knowledge during self-study hours. The in person study sessions focus specifically on exchanging and deepening the previously acquired knowledge and skills with fellow students and (guest) lecturers.

Students and alumni find the content interesting and well connected to the maritime sector. Students also expressed their enthusiasm about the guest speakers and company visits RUAS regularly organises. A number of students indicated that they would like to see even more business-related

components in the curriculum, such as developing skills in data analytics and data-driven working.

### *Research*

Panel discussions with programme representatives as well as the provided documentation show that the MST has taken several actions to strengthen research within the MST since the previous programme assessments of 2019 and 2020. The panel sees that RUAS has been successful in giving research an (even) more prominent role in the curriculum through the various curriculum innovations. The curriculum is now strongly research-oriented, including a strong collaboration with the 'Smart Logistics and Maritime Innovation' lecture-ship cluster.

Students revealed in the panel discussion that they are positive about the research line and thesis line. They work on research cases (research line) in the first three blocks, and on their thesis (thesis line) throughout the entire year. With this set-up, students properly learn how to conduct research. They state that the modules in the research line prepare them well for writing their thesis. Students think that the cases in the research line would be more interesting if they were linked to the content of the knowledge line. In addition, they would (also) like to work on more actual real-life maritime cases.

The panel notes that, while students know who the lecturers are, some students do not know exactly what their role is. Some students are also not always clear about how the assignments /researches the students work on contribute to the maritime sector. The lecturers explained in the panel discussion that the research line is divided into ten research groups, each with its own area of expertise. The lecturers lead three of the seven research groups. The remaining seven research groups fall under the lecturers' responsibility but are led by teacher-researchers. The teachers indicated that the lecturers are most visible to the students who are part of the research groups in which the lecturers are

involved. The quality of research is safeguarded by the close interaction between teacher-researchers and the lecturers.

### *Personal development*

Programme management indicated that the personal development line is one of the components of the curriculum reform in 2024-2025. The learning line includes introductory activities during the introduction period (onboarding) and assignments aimed at students' personal and professional development. The discussions with the programme management revealed that MST needs to improve the onboarding programme. Since the transfer of the licence, the number of students has grown exponentially. The nature of the maritime programme implies that the student population is quite diverse. Students are positive about the diversity of backgrounds, because it contributes to learning from each other and developing different perspectives. Some students mentioned that they found it difficult to connect closely with their peers. They were not sufficiently aware of certain (cultural) customs of fellow students, which sometimes made it challenging to collaborate. RUAS is committed to invest in students' onboarding from next academic year onwards. One of the things that will be implemented is the formation of core groups. Core groups are small groups of up to four students who work on group assignments together under the supervision of a teacher. There will also be an extra focus on interacting with people with different cultural backgrounds during the onboarding period.

### *Language*

The MST is an international programme, which runs in English. The panel considers that RUAS has good reasons to offer the MST in English and thus keep it accessible to international students. Some of the reasons mentioned by the panel are the international focus of the maritime sector and the need for maritime professionals.

### *Enrolment*

When MST was hosted by STC Group, the annual enrolment averaged 15 (predominantly) international students per year. Since the transfer from the STC Group to RUAS, the enrolment has increased to 57 students in 2023.

The master-programme is open to students with a bachelor's degree (hbo/wo) in engineering, shipping, logistics, and business. Students with other bachelor's degrees are also eligible, provided they have at least two years of relevant working experience. To participate in the MST, students must submit a bachelor's degree, their resume, and motivation letter. Students without the required bachelor's degree, but who have the required working experience, must elaborate on their motivation, knowledge and skills during an interview. In addition, students with a non-Dutch bachelor's degree must demonstrate command of the English language (a minimum score of TOEFL iBT:90, IELTS 6.5, or Cambridge 176).

Discussions with students revealed that some students had different expectations regarding the content and design of the programme. The programme management stated that from next academic year onwards, there will be more focus on managing expectations during the introduction period, as part of the personal development line. The panel welcomes RUAS's intention to better manage students' expectations and advises to incorporate the matching in the enrolment procedure for example by adding a personal interview to the intake procedure.

### *Staff*

The staff consists of a programme manager and eight teachers. Teachers have the required academic qualifications. They have relevant professional (maritime) experience and hold at least a master's degree. Three of the teachers have PhDs.

The recent growth in students has led RUAS to increase the number of teachers. The teaching team

has therefore grown from 4 to 8 teachers. In line with RUAS' professionalisation policy, new teachers are required to take the "Quickstart Didactics" within the first year of employment and obtain the "Basic Didactic Competence Qualification" (BDB), including the "Basic Assessment Qualification" (BKE).

RUAS offers a comprehensive professionalisation programme. Teachers can develop their professionalism through attending courses, conferences, symposiums, and maritime-related excursions. RUAS also organises team days each block and professionalisation days every three weeks. Subjects covered during the team days are the alignment of modules and working methods and evaluating the new curriculum. The professionalisation consist, for example, of developing and sharing expertise and skills related to research, or trainings on conducting the final assessment for the thesis. From the academic year 2024/2025 onwards, RUAS will be focusing on ways teachers can coach students on 'self-regulated learning' during the professionalisation sessions.

### *Support*

Students told the panel that they are pleased with their teachers and the support they get from them. Teachers are truly experts in their field and, according to students, friendly, approachable and flexible. Each student (full-time and part-time) is assigned a personal coach (one of the teachers) at the start of the programme. Students can go to their coach with general questions about studying and study planning. Coaches will refer students who require more (specific) support to a student counsellor. Student counsellors guide and support students who experience difficulties due to, for example, having some type of functional impairment.

The programme falls under the supervision of the head of curriculum development. The head of curriculum development, together with the programme manager and teachers, ensures that the

programme is coherent and initiates improvements when necessary. RUAS also has an MST programme committee, which consists of teachers and students. The tasks of the programme committee include overseeing the learning environment and monitoring whether the programme is studyable and feasible. Additionally, the professional field committee -discussed under standard 1- also advises on the studyability and feasibility of the programme.

### *Facilities*

The panel acquired a good impression of the facilities during a tour of the Rotterdam Mainport Institute. The programme is based in a separate part of the RMI, with classrooms and study facilities. There are also project and computer rooms where students can work independently or together on assignments. Students also have access to specialised maritime literature through RMI's library and RUAS' online libraries. In addition to the physical facilities, RUAS also provides the students with a digital learning environment. The digital learning environment includes Brightspace, Osiris (study progress tool), HINT (RUAS' Intranet), Untis (roster) and Microsoft Teams.

### **Considerations**

The panel establishes that the MST offers a challenging learning environment. Students develop the competencies that are essential in the MST by working on complex maritime cases. They learn to make sense of operational processes, understand strategic issues, and provide sound advice. RUAS introduced a new curriculum in 2022 in phases consisting of four learning lines: a knowledge line, a research line, a thesis line and a personal development line. Changes made in the new curriculum include integrating small modules into larger units and strengthening the focus on developing research skills.

RUAS offers interesting and relevant modules. In the knowledge line, students learn to analyse maritime practice issues using theoretical knowledge and formulate an opinion on the outcome. The

focus on research is incredibly strong and master-level worthy. The panel is pleased with the way the STC Group and RUAS have followed up on the recommendations from previous visitations regarding the research component. Students learn how to conduct research well in the thesis line and the research line using the research cycle. The panel finds the fact that students work on their thesis from day one powerful. The panel recommends thinking about a wider scope for the research cases. Each of the three research cases consists of issues linked to ongoing research at the CoE HRTech. RUAS can enhance the programme by not just focusing on CoE research, but also using one or more cases from professional field partners. Additionally, the panel suggests that lectors should be more visible to students, allowing students to gain a better understanding of the role of lectors and the research they conduct.

The panel finds it positive that RUAS has included a personal development line in the curriculum. This line aims to further outline the introduction period (onboarding), and to shape students' personal and professional development from the start. To the panel's satisfaction, from 2024-2025 RUAS will invest in team building activities, ways for students to get to know each other, cultural diversity, and students' personal and professional development. The panel recommends further revising the personal development line by linking personal and professional development activities to the learning outcomes and assessing students accordingly (see standard 3). In terms of increasing student engagement, the panel sees an opportunity in having students set up an events committee at the start of the master's programme.

In addition, RUAS wants to address managing students' expectations at the start of the programme in the personal development line. The panel agrees with investing in managing expectations, and recommends expanding the intake procedure to include for example a personal intake interview.



The panel states that the MST has a strong team of passionate and expert teachers. Teachers hold at least a master's degree and have a background in the maritime field. The panel notes that there is sufficient expertise available to teach the various areas of expertise in the bachelor's programmes. RUAS supports each individual teacher and the team as a whole with team and professionalisation days as well as, for example, participation in subject-related courses, conferences, symposiums, and excursions. Students are positive about the support they receive from their teachers and commend them for their extensive industry knowledge. Furthermore, students find their teachers friendly, approachable and flexible.

In summary, the panel states that RUAS offers a good skills-, knowledge-, and student-focused programme with the MST. The programme enables the students well to investigate maritime issues, develop reflective skills and learn to make

strategic decisions. In addition, the knowledgeable and passionate teachers are well-equipped to support students during the programme.

The MST has an English name and runs in English because of the programme's international focus of the maritime sector and the need for maritime professionals. RUAS therefore wants to keep the programme accessible to international students. The panel considers this a well-founded decision.

Based on the above, the panel establishes that the masters programme, for both the part-time and full-time variant, meets this standard.

### 3. Assessment

#### Findings

The MST follows the RMI-wide assessment policy and is outlined in two documents: the RMI's Education and Assessment Regulations and an MST-specific assessment plan. These documents specify the content of the assessment programme, assessment processes and assessment quality.

During the site visit, the panel spoke to a representation of the examination board and assessment committee. The examination board is responsible for the assessment policy, the appointment of examiners, assuring assessment quality and the end level. The assessment committee is appointed by the examination board and is responsible for monitoring the quality of assessment. Among other things, the assessment committee checks whether the assessments meet the quality criteria of valid, reliable and transparent assessments.

#### *Vision on assessment*

The vision on assessment focuses on integral, autonomous and meaningful assessment. Integral assessment means looking at students' entire performance and not just assessing students' theoretical knowledge. Students work on real-life maritime challenges and in their justifications, analyses and reflections they have to demonstrate that they possess the skills and can apply the knowledge and techniques. The premise of integral assessment is to get a complete picture of students' knowledge and ability regarding professional duties. Autonomous assessment means that students learn to independently and critically assess which knowledge they should apply in a learning situation. Meaningful assessment means that the assessment ties in with the actual maritime sector.

In line with its vision on assessment, RUAS has incorporated stand-alone knowledge modules into

larger units of in the new curriculum. Students work on real-life maritime challenges and are required to demonstrate integrally in their substantiation, analysis and reflection that they can apply their skills and knowledge in practical situations. The number of examination moments has been reduced by moving away from stand-alone modules to larger units. The underlying idea is that students develop skills more efficiently when they do not have to take a lot of exams. Students are supported during the learning process by means of (formative) feedback on completed assignments from teachers and fellow students when carrying out their research.

#### *Assessment system*

All modules are completed with a summative assessment such as written assessments, portfolio, group assignments, and the thesis. During each assessment, students must demonstrate at least two of the five competencies (researching, analysing, managing, advising, influencing). Students are assessed individually. Group work in the research line is assessed individually, on both the contribution students have made individually and in the group.

In discussion with students, teachers, and the programme management, it became clear that students know what is expected of them in terms of the skills, BoKS and learning objectives they must demonstrate. The module manuals are clear and explain well which competencies, BoKS and learning objectives are important for each module. Students noted that some assignments within the knowledge modules are not fully aligned with the specified competencies, BoKS, and learning objectives. The programme management indicated to the panel that they are aware of this. RUAS will refine the learning line to ensure that the competencies, the required knowledge and skills, and the assessment are well aligned.

### *Assessment*

Assessments are documented on an assessment form with specified assessment criteria. Assessments are graded using the qualifications 'requires revision', 'acceptable' and 'expert/excellent'. Qualifications are motivated by the assessment criteria and a written explanation. The acceptable and expert/excellent qualifications are supported by clear rubrics. For a 'requires revision' qualification, teachers are required to provide reasons for the grade in writing. MST organises regular calibration sessions to standardise the evaluation of assessments.

The modules in block 1, 2 and 3 are assessed by 1 examiner. MST organises regular calibration sessions to standardise the evaluation of assessments.

The research proposal and of the thesis module, are assessed by the supervising teacher and a second teacher. Both assessors are appointed as examiners by the examination committee. First, they independently come to a grade. Then, deliberation and coordination take place in order to reach a final grade together. If the assessment is positive, an assessment interview is scheduled for the student. If the assessment is unsatisfactory, the student is granted a retake. This retake consists of an additional assignment.

Prior to the site visit, the panel reviewed a selection of 15 theses and completed assessment forms (see standard 4). Regarding the use of the assessment forms, the panel noted that they do not show how scores of the two examiners differ, and how the final grades were reached. The panel recommends showing the process by which the two examiners' scores were reached in the assessment form.

### *Quality assurance assessment*

Ensuring assessment quality is the responsibility of the examination board. The examination board has drawn up a supervision plan with clear procedures. The examination board monitors the

assessment quality by means of random sampling, among other things. Two to three times a year, the examination board carries out random sampling of master theses to assess whether the final level is satisfactory. Part of the sampling is that members of the examination board attend graduation sessions to observe how assessments are established.

The assessment committee is mandated by the examination board to study assessment constructions, rubrics, and validity. The assessment committee reports to the examination board. In discussion with the examination board and the assessment committee, it became clear that both committees fulfil their quality assurance role. They monitor and evaluate assessments that have already been taken. Assessments of the new curriculum were not (yet) assessed by the assessment committee.

Teachers and lecturers organise regular calibration sessions to ensure consistency and uniformity of grading. Assessment quality is further protected by the four-eye principle for the research proposal and thesis. This means that two assessors evaluate the research proposal and thesis and agree on the final grade together.

### *Chat GPT*

During interviews, lecturers, shared their views on new technologies, including Chat GPT. The lecturers indicated that Chat GPT is considered a valuable software tool that can help students gain new insights. The interviewees emphasised the importance of adequately teaching students how to use such technologies.

## **Considerations**

The panel establishes that the MST has a clear vision on assessment. In discussions with teachers and students, it became clear that they fully support the vision on assessment. The number of assessment moments has been significantly reduced in the new curriculum by merging the individual modules into larger units. The reduction of

assessment moments has lowered the assessment pressure among students.

Students are supported during the learning process through (formative) feedback from teachers and fellow students on completed assignments. All modules are finalised with a summative assessment. Some assignments of the knowledge modules do not clearly align with the competencies, BoKS and learning objectives. The programme management indicated to the panel that they are fine-tuning the knowledge learning line to ensure that the competencies, BoKS, learning objectives and assessments are well aligned.

The panel recommends specifying each competency more in terms of behavioural indicators. Behavioural indicators explain which behaviour(s) relate to the intended competencies. According to the panel, this could enable MST to strengthen the personal development line. Additionally, the panel suggests that MST actively engages with its educational experts during the improvement process.

Assessments are graded using an assessment form with the qualifications 'requires revision', 'acceptable', and 'expert/excellent'. For the 'acceptable' and 'expert/excellent' qualifications, grades are supported by rubrics. For a 'requires revision' qualification, teachers are required to provide reasons for the grade in writing.

Theses are graded by two examiners. The examiners discuss their findings with each other and together reach a final grade. The panel recommends making the grading process more transparent by showing the grades of the two examiners.

The quality assurance system of RUAS is adequate. The examination board is responsible for safeguarding the quality of assessing, and performs an independent, safeguarding role. The examination board primarily focuses on monitoring internal procedures and the final level. The panel advises the MST examination board to take a more proactive role in ensuring the quality of assessments and the final level. For example by also reviewing the (content-related) results of midterms and calibrations.

The assessment committee mandated by the examination board also fulfils a safeguarding role. The assessment committee evaluates the assessments that have already been taken. The assessments of the new curriculum are not assessed by the assessment committee before the assessments are taken. The panel recommends evaluating the validity of every new assessment before the start of the course.

In summary, the panel is positive about how MST organises assessments and promotes student learning. Since it is not always clear for some assignments of the knowledge modules how the assignment relates to the different competencies, BoKS and learning objectives, the panel recommends working out each competency more into behavioural indicators. Additionally, the panel advises MST to actively engage with educational experts during the improvement process.

Taking these considerations into account, the panel establishes that the MST meets this standard.

## 4. Achieved learning outcomes

### Findings

At the MST of RUAS, 53 students had graduated at the time of the site visit. To evaluate the achieved learning outcomes of the master, the panel reviewed 15 theses of students who graduated in 2022 and 2023. Based on the results, the panel concludes that the master's level has been achieved.

#### *Thesis*

For the thesis (15 EC), students must demonstrate their ability to independently set up, conduct, and report on their research. Students should make a valuable contribution to the maritime sector at master's level by conducting research addressing a complex maritime issue. They can research an issue from a chosen maritime company or from one of the ongoing research projects within CoE HRTech.

Students start from day 1 with the thesis module (see standard 2). The thesis module consists of writing a research proposal and writing a thesis. Students will be supervised by a thesis supervisor. The research proposal includes the research question, a preliminary theoretical study and a description of the planned methodology. Students should receive a 'go' from their supervisor and a second independent tutor at the end of the third block. After the 'go', students start the actual research according to the described methodology. Students document the results of the research in their thesis. Students complete the thesis module with an assessment interview. Requirements for anything related to the thesis are listed in the thesis manual, which can be found on Brightspace.

#### *Professional field*

Representatives of the professional field are very satisfied with the knowledge and level from professionals who have completed the MST. The level of thinking and work fits well with the field's need for practice-oriented master-trained professionals

with knowledge of the maritime sector. The MST professionals are very capable of finding innovative solutions to maritime problems and providing sound strategic advice.

#### *Alumni*

Alumni the panel spoke with are also satisfied with the MST. The alumni talked enthusiastically about how much they have developed throughout the programme, both professionally and personally. The knowledge and skills they acquired are relevant to the sector, and the alumni apply much of that knowledge on a daily basis. They mentioned the broad and in-depth knowledge of operational processes, and analytical and writing skills, as examples. The alumni also reported having made promotions and taking on new roles better than before starting the programme.

### Considerations

The panel establishes that the theses of the MST have been realised at the intended master's level. The thesis module is well set up. The module manual is written in such a way that it is clear to students what is expected of them during the module and the graduation process. The panel recommends that MST researches the possibility of working with professional products, allowing students to demonstrate their ability to apply research.

Both professional field representatives and alumni are very satisfied with the knowledge and skills covered during the programme and in the thesis. The professional field representatives indicated that the graduates' level of thinking and work fit well with what their organisations' need. Professionals who have completed the MST apply the knowledge and skills gained during the programme on a daily basis.

Taking these considerations into account, the panel establishes that the MST meets this standard.

## Attachment 1: assessment panel

dr. R. (Ronald) Stevens, chair  
Associate professor and researcher, VU Zijlstra Centre

prof.dr. A.W. (Albert) Veenstra, panel member  
Professor of Trade & Logistics, Rotterdam School of Management

mr. ing. G. (Gerrit) van Leunen, MSc, lid  
Director Maritime Institute Willem Barentsz (NHLStenden University of Applied Sciences) and lecturer of the M Marine Shipping Innovations

M. (Maarten) Peels, BA, studentlid  
Student MA Applied Ethics, Utrecht University

The panel was supported by Yvet Blom, as a certified secretary.

All panel members have completed, signed, and submitted a statement of independence and impartiality to NVAO.



## Attachment 2: site visit schedule

Tijd	Thema
11.00 – 12.00	Arrival panel
12.00– 13.00	Meeting with the programme management Programme presentation
13.00 – 14.00	Lunch
14.00 – 14.45	Meeting with examiners (final level & research)
14.45 – 15.00	Break / closed meeting panel
15.00 – 15.30	Meeting with examination board and assessment committee
15.30 – 15.45	Break / closed meeting panel
15.45 – 16.30	Meeting with alumni and professional field representatives
16.45 – 17.00	Focus areas day 2 and feedback day 1
<b>Dag 2 – 16 april</b>	
09.00 – 09.30	Arrival panel & closed meeting
09.30 – 10.30	Meeting with the students
10.30 – 11.00	Guided tour
11.00 – 12.00	Teachers including programme committee
12.00 – 12.45	Lunch
12.45 – 13.45	Pending issues, closed meeting
13.45 – 14.15	Plenary feedback of findings panel

Initiated by the programme, a development dialogue will be planned in the course of 2024. The results of this development dialogue have no influence on the assessment presented in this report.

## Attachment 3: documents

- Self evaluation
- Educational Profile Shipping and Transport
- Curriculum schemes
- Literature
- BoKS MST2023
- Digital course materials
- Thesis manuals
- Selected works including a folder for each selected student containing their work and assessment forms
- Curriculum vitae staff
- Professionalisation plan including the annual plan for 2022-2023
- Professionalisation plan for 2023-2024
- RMI Professionalisation policy 2022
- Annual and professionalisation plan for MST 2021-2022
- Annual and professionalisation plan for MST 2022-2023
- MST Annual plan for 2023-2024
- Examination board annual report 2022-2023
- Assessment committee annual report 2022-2023
- Minutes of the programme committee 2022/2023
- Programme committee annual report 2022-2023
- Work experience survey 2023
- National student survey 2022-2023
- Student evaluations 2023/2024
- Minutes of the professional field committee
- Calibration documents for final works
- Minutes of team meetings and professionalism meetings
- Report from the final level lecturer
- Education examination regulations
- RUAS Guide 2023-2024
- Student Handbook 2023-2024
- RUAS Guide 2022-2023
- Student Handbook 2022-2023
- Assessment plan and assessment policy
- RMI Assessment policy 2022-2025
- Assessment plan for MST 2021-2022
- Assessment plan for MST 2022-2023
- Assessment plan for MST 2023-2024
- Graduation work of 15 fulltime students

