

## QMS MTC builds up a more sustainable learning model in shipping

*Driving change and actualizing success, QMS MTC a leading maritime training center which was set up in 1996, has established a life long learning program for ships' officers placing equal importance on technical and soft skills training.*

*In the interview that follows Katerina Lyrantzis, Chief Operations Officer of QMS Maritime Training Center describes the center's training programs to meet shipping industry's best practices and explains QMS MTC's strategy to promote educational and environmental initiatives working with Greek Universities, Maritime Academies and Nautical High Schools.*



Katerina Lyrantzis  
Chief Operations Officer  
BSc, MSc, MBA  
QMS Maritime Training Center

**- Describe the training and learning activities of your organization in the sector of maritime education.**

- QMS Maritime Training Center is a premier private Maritime Training Center, based in Piraeus, Greece with almost three decades of successful operations. We have significant presence in the International Maritime Education sector and have successfully trained over 30,000 Active & Retired Seafarers and Shipping Company Executives, Greek & worldwide Nationalities since 1996.

We provide programs to cover all levels of

knowledge and ability, for Seagoing & Retired Mariners, Merchant Marine Academy Students, Maritime University Graduates, Shipping Company Shore Staff and Senior Executives for further professional development, through Classroom, Synchronous Online, Blended, In-House, On-Location and On-Board Fleet maritime training courses and programs.

QMS MTC strongly believe that without proper knowledge shipping cannot move forward to efficiently promote Shipowner's interests and Ship Charterer's demanding requirements. We are in tune with the demands of international maritime regulations in order to provide best in class training programs which are competitive and commercially driven. Our goal has always been, and will continue, to strategically partner with our clients to assist them in compliance with regulatory market requirements to protect Shipowners' fiscal and operational interests through investing in the most crucial element of the international shipping link - their People. In particular, QMS MTC offers:

- Over 25 STCW EU Flag Approved Programs for statutory Certifications of Proficiency, including Polar Ice Training, Basic & Advanced STCW Safety Training, Tanker Safety Courses, BRM, ERM, High Voltage
- Operational Deck and Engine Programs for our Officers with a host of Marine Simulators suites
- Technical Engineering Courses with hands on training in Machinery Workshops to hone on the job workshop skills of Engine Officers, such as Welding, Automation, Refrigeration for example, Lathe
- Maritime Management Systems on the Industry Standards that govern our industry, from ISM to ISO 50001 Energy

Management Systems, to new SIRE 2.0 and RISQ3 requirements

- Executive Management courses which emphasize the soft skills and human element factor in Shipping
- Competence Assessment & Testing programs for Officers, as per TMSA, ICMG, BCA&V, SIRE 2.0 & RISQ3 to evaluate technical and soft skills capabilities

All our training programs are enhanced with state of the art Navigation, Engine, ECDIS, LICOS, GMDSS and MAN/Wartsila Type Simulators.

A great number of students have passed through our doors, with varying expertise and qualifications. I believe however that what characterizes QMS MTC as a leading pioneer in its field is that throughout all these programs, we place equal importance on technical, as well as, soft skills training. After all, the seafarers is a person, not just a machine, and must be viewed as such.

**- What is the ranking and valuation of your organization's programs in the global marine education arena?**

- QMS MTC considers itself as providing a value proposition to its clients. We are good at what we do. We know how to do it and we understand what the contemporary Officer or Maritime Executive needs. We don't simply provide an 'off the shelf' Ship Safety Officer or BRM BTM Course. Thought and copious amounts of time and effort go into each and every program. We place due diligence on the enhanced skills and competence of the people that come to us for training.

We continuously seek to improve our processes and performance metrics to meet the shipping industry's best practices. Evidence to this are the recognized Certificates of Training we have provided to our clientele over the years. If I could 'rank' QMS MTC or place a 'valuation' on the services we provide, I would rather let the numbers speak for themselves. Our experience, infrastructure, equipment, number of education programs, clientele, trainees, conducted activities and recognitions abroad are commendations that have accumulated over this hard work that we put in every day at the office.

- Specifically,
- QMS MTC was of the first private Maritime Training Center to establish itself in the Greek maritime cluster since 1996.
  - We are the first Greek Maritime Training Center to be shortlisted for the Lloyds List Maritime Awards in the Category of Excellence in Maritime Training and Education.
  - QMS MTC was the first to establish co-operations and transfer of knowledge with State University of New York, Kings Point Maritime Academy, Seagull Norway, back in the days back when Greek shipping had no previous references to BRM BTM training or Bridge / Engine Simulators.
  - QMS MTC boasts modern infrastructure and state of the art marine simulators, such as: two Full Mission Bridge Simulators with Ice Navigation Module, MC, RTA, RT-Flex, X-DF (Dual Fuel) and MEE type Controlled Engine Simulators, GMDSS with

Iridium functionality, ECDIS more than 20 Type Specific Approved Training Partners, fully equipped in house Refrigeration and Automation workshops over a work space of over 700 square meters located right in the hub of the Piraeus shipping scene.

- QMS MTC has a clientele of over 600 shipping companies, locally and abroad, and has trained more than 35,000 thousands of ship and shore based personnel and conducted over 60,000 MET programs.

- We have been called to provide our services to our stakeholders in locations such as, Miami, Amsterdam, Rotterdam, Norway, GTT UK, Hamburg, New Delhi, Mumbai, Hong Kong, Oman, Manila, Jeddah, Rabbigh, Lagos, Dubai, Havana, Cyprus, various Greek islands, Thessaloniki, as well as onboard vessels while en route their next port of call.

- We have presented high level Executive Management Masterclass Workshops to the shipping industry as industry regulations unfold in order to timely inform and open boardroom discussions.

- QMS MTC is recognized and accredited by the following Flag State Administrations: Cyprus, Liberia, Malta Transport and Marshall Islands, while also being a Safe-bridge ECDIS Type Specific Training Partner; by the Hellenic Association of Industrial Organizations; a member of the International Maritime Lecturers Association, International Association of Maritime Universities, active members of the Piraeus Association for Maritime Arbitrators, a member of the Maritime Hellas Cluster, is one of 100 Approved Test Centers worldwide for the Ocean Technologies MARLINS Maritime English Language testing program for seafarers. Most recently we have been invited to sign MOU with the Piraeus Chamber of Commerce & Industry for Experiential Education Training with the use of Marine Simulators in the Piraeus shipping industry through the University of Piraeus.

All of the above valuations prove to us that what we do works and we must continue in this direction to thrive and increase our long-term sustainability with innovative strategies and synergies.

***- Beyond the compulsory studies of your programs do you aim at the development of your trainees' skills including leadership & resilience in crisis situations?***

- The rate of technological advancement in the maritime industry is increasing at galloping speed – more so today, than in the past. A case in point is the new Governmental Presidential Law 4770/2023 which mandates compulsory digitalization of the Greek shipping industry by the year 2025. An increasing number of key functions, once performed by humans, have been replaced by autonomous operating systems and machines, taking the human element out of the equation. As decision making in all levels, from the Bridge to the Boardroom, is becoming re-defined, new ways of working must be created to ensure the safety, efficiency and reliability of future ship operations. There is a fine line to maintain between 'old school' ways of navigation and over confidence in the involvement of machines. We must go back to where we started – placing an ECDIS stigma by hand, not by machine!

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In all our training programs we include components of leadership competencies, soft skills elements and spend time in the classroom to discuss these critical concepts either through case studies, scenarios or simulation exercises. Issues such as leadership, communication, teamwork, cultural awareness, decision making are openly reviewed and evaluated with the trainees in small group settings. These skills are vital for seafarers who work in multinational environment's and interact with diverse stakeholders. It is not a coincidence that SIRE 2.0 tanker vetting requirements are now more focused on the competency aspect of the job description, nor that the new BRM BTM IMO Model Course 1.22 which will be published in the near future will place a heavy emphasis on the human element

component of the Bridge Officer. The OCIMF BCAV publication places targeted due diligence on the evaluation of non-technical skills and behavioral competence.

It is critical that the non-technical skills requirements, in particular the leadership competencies, be re-evaluated as new operational paradigms of shipping systems emerge and evolve. Whereas best practices for assessing the hard, technical skills are prevalent and well actuated, approaches to assessing the intangible soft skills and 'behavioural competence' are still relatively new. The industry still has a long way to go but steps are being set forth in the right direction. At the end of the day, it is really about changing the mindset and attitudes of seafarers and managers. It is definitely no small task, but this mindset exerts significant influence over how safety and effectively ships operate.

***- Have you diversified your teaching and learning methods taking advantage of the internet possibilities and artificial intelligence patterns?***

- Following the onset of COVID, it was either go online or lock down for us! Due to the high caliber level of my in-house team, we were able to literally connect with our client's homes and offices the very next day after COVID arrived back in March 2020. One of the few good changes the pandemic brought to us was the multiple possibilities that can be provided through the Internet. This has awarded QMS MTC opportunities to go beyond Piraeus and infiltrate the international market. All our Navigation, Engine, ECDIS, and GMDSS Simulators can be accessed online so that our courses can run from different locations simultaneously while maintaining the same functionality, interaction and role play as if the trainees were in our Piraeus Training Center.

We have been using Machine Learning since 2018 and have become increasingly versatile by involving online, blended, classroom, onboard oftentimes all at the same time for our courses to run. We even connect our two Bridges so that we have two Bridge Teams that can communicate and interact with each other while also connecting our Bridge Team with Engine Team and provide a range of real-life onboard scenarios that the trainees are called upon to resolve.

AI patterns are fast approaching and have already begun to be utilized in maritime education and training! The amount of research being done is astounding. Surely, QMS MTC plans to include more of this emerging technology in the near future!

Virtual Reality platforms create more realistic environments and replicate real world scenarios, allowing trainees to practice navigation, ship handling and other maritime operations in a controlled and safe setting.

Additionally, QMS MTC relies heavily on technology as it changes. Specifically in 2017, we implemented a customized ERP program, which due to the increasing needs of technology assets we are also incorporating a new Learning Management System platform through which the trainee will have full access to online learning content, can access information and learning materials anytime from anywhere, engage in interactive learning games and quizzes to diversify learning resources to cater to a variety of trainee learning styles and enhance learners engagement.

As mentioned earlier on, the entire shipping industry has much work ahead with all the rapid technological changes coming about – not just for the field of MET! AI most certainly will revolutionize and challenge maritime education and training enabling more meaningful experiences for our Trainees.

**- How do you face the challenge of energy transition in shipping? Have you included this critical topic in your learning objectives?**

- Energy transition is indeed a big challenge for the shipping industry, and will continue to be at the forefront for some time to come as technology and research unfolds. Change does not come easily nor quickly in this industry as we know. With increasing global concerns about climate change and environmental impact, maritime training and education must incorporate more emphasis on eco-friendly practices, how to optimize the operational profile of the company, vessel, machinery and the stakeholders involved. To achieve this, we must provide maritime training in energy-efficient operations, emissions reduction, waste management, and compliance with international environmental regulations.

QMS MTC, being fully compliant to this market need, has created a **2day Ship Energy Efficiency Management Course**, for all shipping company staff and Officers which trains participants on learning how to save money and understand the energy losses onboard modern ships on electro-mechanical equipment such as: Diesel Engines, Waste Heat Recovery Systems, Electrical Systems, Heating, Ventilation and Air Conditioning, Maintenance and Human Element involvement. The second reason is decoupling from fossil fuel use, which is no easy task.

Many years of R&D are needed to start gathering results and quantifiable evidence to determine which new fuel will be applied. When this will be decided, then we need to create infrastructure to deliver this fuel. For the moment, fuel from Natural Gas is prevalent as infrastructure exists and research results have amassed as LNG carriers consume their own cargo. However, many consider it as a transition fossil fuel versus more sustainable means, such as hydrogen and ammonia fuels.

QMS MTC has developed three specialized courses for Marine Engineers, Fleet Technical Managers & Superintendents, Gas Engineers Engine & Electrical Officers. Our course LNG In Shipping aims to increase knowledge on properties, safe handling, use and safety of natural gas. Additionally, QMS MTC offers **4 Stroke Dual Fuel Engine Simulation and WINGD X-DF Type Engine Simulation courses** which focus heavily on utilization of gas and oil fuel management, DF operation hazards, safety assurance, pollution prevention, DE machinery control systems & emergency operation, remote & local operation of essential auxiliary machinery, HV electrical supply & control systems competence and operating power systems

over 1000 Volt. These courses are of course enhanced with extensive practice on our DF Diesel Electric Engine Simulator. Utilizing maritime trainings will help shipping overcome the difficulty of the energy crisis. The industry has been summoned to implement cutting-edge practices and technologies as the planet strives to reduce carbon emissions and transition to cleaner, more sustainable energy sources. The ability to operate and maintain ships with propulsion systems driven by alternative fuels, such as LNG, hydrogen, or electricity, will be supported by maritime training programs such as those provided by QMS MTC.

These training programs will emphasize improving knowledge of new energy systems, increasing energy efficiency, and putting best ship management practices in force. Maritime training will help the industry handle the complexities of energy by developing a highly competent and adaptive workforce.

**- What are your future plans and describe your initiatives to present job opportunities to the academy's graduates?**

- I have many plans for the future! Projects, ideas and collaborations I would like to see more of in our industry. However, for the immediate future, the next few years I would like to focus on building up a more sustainable business model for QMS MTC.

I find a personal satisfaction in building up my business, promote environmental initiatives, mitigate potential business risks, be purpose driven, motivate and build the skill sets of my team. In my opinion, I am convinced these motivators will give QMS MTC the competitive advantage over others to thrive, drive change and actualize success.

Because we are in the education industry, QMS MTC understands and appreciates knowledge for what it is. A process of lifelong learning is a critical element in the evolution of any specialty and industry. This happens consciously, thoughtfully and consistently and is especially significant for graduates of Maritime Institutions and future seafarers. Due to the specific hazardous nature of their job and associated risks, it is imperative that Officers constantly update their qualifications and knowledge.

It is literally the very reason why our Founder & CEO, Mrs. Kalliope Lyrantzis, established this company. She is an avid believer that learning should not stop at the secondary school level. Seafarers need to constantly evolve their knowledge and qualifications.

After receiving education and formal learning in MET institutions they have a solid basis for further continuous professional development and informal learning in the field. After all, does a doctor stop learning when he receives his Medical Degree? Most definitely not! He must consistently seek to self-improve, learn new methodologies, and update his knowledge as the medical field evolves.

We understand this philosophy to our core. That is why we like to initiate it early. We work with local Greek Universities and train their graduating students, offer internships to cultivate workforce skills, present to AEN graduates the profile of the modern seafarer and what skills and qualifications will be required after leaving the Academy to promote employability, provide learning days to the Professional Nautical High Schools for hands on training with our Simulators and discussions with our Trainers, offer premium courses and exchange of knowledge with University graduates.

We do all this wholeheartedly so that we can start at the very core of shipping – the people – and develop best practice mindsets so that they can become valuable assets to the future of international shipping.