

# DISCOVER DREAM EXPLORE

*Adventure awaits...*







## NAUTICAL BY NATURE



International maritime signal flags are used to communicate important messages from ship to ship while out at sea. There is a signal flag for each letter of the alphabet, with pennant flags for numerals. Signal flags can also have other meanings on their own or in specific combinations.

Spelling my  
name using  
nautical flags




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# Getting to know my A, B & Seas



Before I started working on this career scrapbook, I knew little about the maritime industry. I also didn't know what I wanted to work as. So, was it even possible for me to find a job or build an exciting, rewarding career for myself in this industry?

Then I started digging for more information and, wow! It's been a real eye-opener. The maritime industry is one that I definitely see myself in, now.

First, I went to the [MaritimeONE](#) (the ONE stands for Outreach Network!) website and learnt that they engage students like me by giving talks, holding networking events among potential employers and students, planning student outreach events, and offering scholarships. That's already a plus point for me, because I will get to learn so much more about the port, shipping and maritime services sectors. On top of that, make many new friends in the industry!

During the Singapore Maritime Week, I met Mr Goh Teik Poh, Chairman of the Maritime Industry Advisory Council, Singapore Polytechnic. He put me in touch with some cool people in the industry, such as Ivy Lum and Jackie Lan, who symbolise [#girlpower](#) in the shipping finance industry (page 14). Then, there's Ivan Lim, who went from helping his father as a stall assistant to becoming General Manager at Keppel Shipyard (page 22). I've enjoyed taking a peek at their jobs, as you will see in these pages!

I also got to learn about the super high-tech [Tuas mega port](#) (page 8), and I am sure I want to be in this industry when it's up in 2040! This new terminal will harness solar energy for the bulk of its operations, and drones may be used for certain tasks like delivering emergency supplies to ships out at sea.

These are the cutting-edge concepts led by the industry that get me really excited. Yes, the maritime industry has been around for a long time, but I love how it's always evolving with the times and staying relevant. There's never a boring day here.

There are so many varied fields to explore - from maritime law to marine insurance, shipbroking and even naval architecture. I had lots of fun trying the quiz and matching my personality to the right job (page 26). Piecing together expert guidance (page 34) and compiling a list of maritime courses (page 24) turned out to be very helpful too.

I had loads of fun putting this scrapbook together, and in the process, have learnt so much about the maritime industry. I'm a fan! [#maritimeforlife](#)

## Me, Myself and I



# READY, SET, GO!

TO KEEP SINGAPORE'S POSITION AS THE WORLD'S LEADING MARITIME CAPITAL, THE INDUSTRY OFFERS MANY INNOVATIVE CAREERS. TAKE A LOOK AT THESE VALUE-ADDING JOBS!

The maritime industry continues to be a significant engine of growth for Singapore's economy, making up 7 per cent of the nation's GDP and employing more than 170,000 people in various technical and commerce related functions.

Maritime Singapore is a thriving ecosystem, comprising our global hub port and international maritime centre. Singapore is ranked first as the world's leading maritime centre by both the Xinhua-Baltic Exchange and Menon studies. Maritime Singapore offers good opportunities for people from various backgrounds to develop their careers in each of its main sectors: Port, Shipping, Maritime Services, and Offshore and Marine Engineering.

The functioning and the evolution of the maritime industry wouldn't be possible without its people, who work relentlessly in the pursuit of excellence. Here are some of the careers that help to drive Singapore as a leading international maritime centre and global hub port.

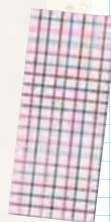
## SHIPPING

### SHIPPING ANALYST

\* Gathers market intelligence. Provides strategic recommendations based on accurate, timely analysis of shipping data and trends.

### POST FIXTURE EXECUTIVE

\* Monitors a ship's schedule and status before its arrival at ports, and manages its delivery and re-delivery notices. Ensures timely payment of receivables and processing of claims.







## MARITIME SERVICES

### Marine Insurance Underwriter

- Underwrites international corporate-related risks. Determines whether to accept, modify or decline a risk by evaluating the organisation's financial background and other pertinent information.

### Maritime Lawyer

- Aids clients on ship finance matters, including provision of legal documentation required for sale and purchase. Mediates and advises on disputes arising from casualties, accidents and other disputes that arise from contracts.

### Ship Finance Associate

- Markets to new and existing clients and manages existing loans. Carries out credit analysis and investigation of existing and prospective clients.

## PORT

### SYSTEMS ENGINEER

- Ensures the port's IT network infrastructure and e-commerce platforms work smoothly. Develops new technologies to improve port operations.

### LEAD ENGINEER

- Monitors staff training in the maintenance of new equipment. Oversees the installation and commissioning of new port equipment and technologies.

### NAVAL ARCHITECT

- Designs and oversees the construction of ships to ensure that they are safe and efficient.

## SHIPYARD

### SERVICE ENGINEER

- Executes field service activities, such as overhaul, repair, and troubleshooting of engine components and auxiliary systems in vessels.

### HEALTH, SAFETY AND ENVIRONMENT (HSE) OFFICER

- Promotes and enforces the safety conduct of project activities with compliance to the legislative requirements through coordinating the implementation and maintenance of health, safety and environmental policies.

EMERGING TRENDS IN THE  
EVER-EVOLVING MARITIME  
INDUSTRY HAVE RESULTED IN EXCITING  
NEW JOBS FOR A NEW GENERATION.

# THE FUTURE IS

I HELP MY  
CLIENTS ADAPT TO  
CHANGES FOR A BETTER,  
**GREENER**  
ENVIRONMENT.



ELSIE TANG, 30  
SENIOR CONSULTANT, DNV GL  
(BACHELOR OF SCIENCE IN  
MARITIME STUDIES,  
NANYANG TECHNOLOGICAL UNIVERSITY)

You don't have to spend a lifetime sailing the seven seas to be part of the maritime industry anymore. New developments, such as the use of liquefied natural gas (LNG) and data analysis, are shaping the future and offer diverse career paths to explore. Two young professionals share their experiences at the forefront of these emerging trends.

## 3 must-have skills

- 1 PROBLEM SOLVING**  
Every project has to be solved and addressed in different ways, so creativity is essential.
- 2 EFFECTIVE COMMUNICATION**  
It is necessary to communicate effectively and frequently with clients to understand their needs.
- 3 PROFICIENCY WITH CONSULTING TOOLS**  
SWOT analysis, spider web, and sensitivity analysis will be part of your daily tools.

### TURNING THE WATERS GREEN

With the push towards sustainable energy and Singapore's plans to be LNG-bunker ready by 2020, a greener industry is expected to take root here.

Elsie Tang is one such professional helping to make the industry more environmentally sustainable. As a senior consultant with DNV GL, an organisation that provides classification and technical assurance services to maritime companies, she works with clients to assess the feasibility of switching their fleets from traditional oil-based marine fuel to LNG fuel.

"Using LNG as fuel offers clear environmental benefits, such as the elimination of SOx emissions, significant reduction of NOx and particulate matter, and a small reduction in greenhouse gas emissions," says Elsie, who holds a Bachelor of Science in Maritime Studies from Nanyang Technological University.

As a Green Advocate, she takes pride in her role to make the oceans greener. "After working on this matter for about six years, I am glad to see a gradual acceptance of alternative fuels from owners and operators. The most important thing is that I am supporting them in adapting to these changes for a better environment."





# BRIGHT

YOU CAN  
BE THE PERSON  
WHO DISRUPTS  
THE WAY THE MARKET  
IS MOVING.

## BUNKERING DOWN FOR A NEW SKILL

While other millennials check social media compulsively, Sean Warr taps on his smartphone mainly for work. As a bunker procurement and operations personnel with BW Group, he keeps a close watch on the prices of bunker, or ship fuel, against the crude oil market, as he is responsible for purchasing bunkers at favourable prices.

Like many parts of the shipping sector, bunker trading increasingly relies on technical and analytical tools in varied situations. For instance, making procurement calls does not just involve watching the crude oil market and monitoring its fundamentals. Sharp technical analysis is also required to time the market perfectly to purchase bunkers at the most competitive prices. This involves observing data patterns to identify trends and make predictions. In Sean's job, a lot of market data needs to be analysed.

Although he did not study computer science, Sean plans to pick it up to some degree as it is increasingly important for the job. Some of these programming languages include Excel's Visual Basic, Structured Query Language and Python. "These are versatile and incredibly useful in creating trading strategies," he explains. Keen on self-improvement, Sean adds that he is fortunate as BW Group offers good training support.

Sean, who has an Honours Degree in International Business from the University of Birmingham and a Diploma in Shipping Operations and Management from Singapore Polytechnic, thrives on the dynamic, ever-evolving landscape of the maritime industry. He says: "Having technological skills and being adaptable allows one to be the market disruptor and not be the disrupted."



SEAN WARR, 28  
BUNKER PROCUREMENT &  
OPERATIONS, BW GROUP  
(HONOURS DEGREE IN INTERNATIONAL BUSINESS,  
UNIVERSITY OF BIRMINGHAM)



1

### ADAPTABILITY

The maritime industry is fast paced and exciting, so it's important to be able to think on your feet and respond to rapidly changing circumstances.

2

### EFFECTIVE COMMUNICATION

Negotiation skills are a must to stay ahead of the curve in bunker trading.

3

### ANALYSIS

Analytical and strategic thinking skills are key in making rigorous market analyses and predictions.

## FUN FACT

Seaborne trade is the most energy-efficient mode of transporting cargo and has been an important lifeline for Singapore since its founding in 1819.

# SUPER-SIZED Ambitions

THE FUTURE OF SINGAPORE'S MARITIME

INDUSTRY WILL REST SQUARELY ON ONE HIGH-TECH MEGA PORT.  
THIS IS WHAT YOU CAN EXPECT TO SEE  
AT THE PLANNED TUAS TERMINAL.



Anticipating and preparing for challenges that lie ahead is a prerequisite for success in anything one undertakes in life. And it's what's behind the Port of Singapore's ability to maintain pole position among other global leaders in the maritime arena, despite challenges such as increased competition and a slowdown in global demand. To ensure the longevity of this success, Singapore has already started working on solutions to problems we will face – not just a year or two from now, but decades ahead.

The Tuas Terminal, which will be the size of two Ang Mo Kio towns pieced together, will allow for more efficient operations by consolidating all port activities in one colossal hub that can cater to even the biggest of ships. Let's take a closer look at these futuristic features:

EFFICIENCY BOOST

SAFETY BOOST

SUSTAINABILITY BOOST

SECURITY BOOST

## Right on time

Ships today may spend hours waiting for their turn to dock. This will no longer be a problem with the next-generation Vessel Traffic Management System (VTMS), which uses predictive and data analytics to determine just-in-time arrival and to process vessel traffic information.



## Data sharing

The Just In Time Planning and Coordination System (JITCS) helps reduce waiting times for ships. It shares data, such as arrival and berthing times, with port agencies so that service crew can accurately and efficiently allocate pilots and berths to arriving ships.



## Smart robots

Automated Guided Vehicles (AGVs) will be used to transport cargo, reducing the risk of accidents. The Ministry of Transport and PSA Corporation are already testing an autonomous truck platooning system, involving a human-driven lead truck leading a convoy of driverless ones.



## I see you

The Maritime Sense Making System (MSMS) integrates real-time data from multiple sources and utilises analytics, anomaly detection, and data mining to identify illegal bunkering, speeding ships, and vessels lacking the proper permits.







**A stone's throw away**  
A multi-tiered land concept hosting port-related services is being explored and will be located near to various port activities. This will allow all parties to exchange information and work more efficiently.

**Cutting the red tape**  
The Maritime Single Window (MSW) is a digital portal that enables information to be easily exchanged between the public and private sectors. It will simplify port clearance procedures, allowing ships to dock and depart faster.

**Let the sun provide**  
This future-ready port will draw on alternative energy sources, such as solar power, to operate a large portion of its facilities. State-of-the-art solar modules from Japan are already being used at Pasir Panjang Terminal Building 3.

**Greener shipping**  
A greater percentage of the global shipping fleet will be powered by liquefied natural gas (LNG), a cleaner fuel, in the future. Researchers forecast the demand for natural gas to double by 2040.

## BY THE NUMBERS

TUAS TERMINAL

**4** DEVELOPMENTAL PHASES

**1,337**  
HECTARES

PROJECTED SIZE BY 2040

**S\$12 million**

Funds that the Maritime and Port Authority of Singapore has channelled into an LNG pilot programme, which encourages companies to build LNG-fuelled ships and develop ideas to support the LNG drive.

THE MARITIME INDUSTRY CONTRIBUTES TO **7%** OF SINGAPORE'S GDP

PSA unboxed, a corporate venture capital arm of PSA International, seeks to promote innovation in logistics solutions for the shipping industry with an initial fund size of

**S\$20 million**

**65**

**MILLION TEUs**

PROJECTED CAPACITY BY 2040

**26**

battery-powered, automated guided vehicles (AGVs) are currently being tested at Pasir Panjang Terminal. These machines move cargo from the vessel to the yard.

MY JOB SERVES  
THE NATIONAL INTEREST  
AND MAKES **AN IMPACT** ON  
THE LIVES OF MY FAMILY  
AND FRIENDS.

SEE YONG YUN, 36  
LEAD SYSTEM ANALYST  
JURONG PORT



# TAPPING ON HIS EXPERTISE

“ When I was young, I liked playing computer games, and guess what? My work today revolves around technology! Computer experts are needed everywhere, even in shipping. My work involves simplifying processes with the help of technology to improve the operating system for my colleagues at Jurong Port, which welcomes over 13,000 vessels each year from the region and internationally. We need to be quick and efficient in solving technical issues, so that ships can continue to load and unload cargo at our port without delays.

## INNOVATING AT WORK

One interesting project I did was to create a platform to make it easier and efficient for my colleagues to procure supplies and services. In the past, they had to key in information manually into different sites. Today, we input all the information into one system called JProcure, consolidating the data from various sites previously. Keying in the details on one portal not only saves us time, but is also hassle-free.

## ABOVE & BEYOND

I may be good at computers, but I knew little about the maritime industry or how things worked at the port when I first joined. So I learnt the ropes by talking to people: my port operations colleagues whom I interact with daily and the veterans who've worked in the shipping sector for decades. They all share one thing in common: they enjoy the work that they are doing. You may not realise this, but the maritime industry is exhilarating as it is one that never sleeps. Ships sail in and out of the port, 24 hours a day. Like my colleagues, I also enjoy working in a job that serves the national interest and makes an impact on the lives of my family and friends.

**YONG YUN'S TOP TIP**  
Keep yourself updated on the  
latest technologies as things  
are always changing!

## His career timeline

**2002** Received Diploma in  
Information Technology  
from Singapore  
Polytechnic

**2005** Graduated with a  
Degree in Business  
Computing from the  
Royal Melbourne  
Institute of Technology

**Aug  
2013** Joined Jurong Port as  
a Senior System Analyst

**Jun  
2015** Promoted to  
Lead System Analyst



When a top shipping company was declared bankrupt in 2016, the ripples from its demise rocked the global shipping industry. In Singapore, many shipping containers were left on cargo ships and in the ports.

Lim Tzer Jing, then three years into her job with PSA Corporation Ltd, was called to action. She was actively involved in the facilitation of shippers' and consignees' queries on their cargo shipment, which were contained in the collapsed shipping line's containers. "I learnt about the role of container lessors and witnessed how PSA stepped forward to facilitate the movement of cargo to their final destination and the containers to their owners, reducing the disruptive impact to the supply chain," she says.

Tzer Jing was awarded the PSA – MaritimeONE scholarship in 2011 and graduated from Nanyang Technological University with a Bachelor of Science in Maritime Studies. She joined PSA as an Operations Executive in 2013 and was promoted to Assistant Manager soon after on account of her good performance. "I was fortunate to have learning opportunities as I progressed in my career," she adds.

Starting at the Tanjong Pagar Terminal's control centre, she went on to plan yard locations for discharged containers after 1.5 years. This planning process can be a complex puzzle as planners need to maximise efficiency and reduce congestion in the storage area.

The exciting diversity of port operations work is what keeps Tzer Jing interested in the industry. "No two days are the same. With so many different operations and projects, I feel like I am in a different job every year. There is no time to be bored!"

**TZER JING'S TOP TIP**  
Hunt for internship opportunities and speak to industry insiders, so you can make an informed decision on whether the industry really suits you.

# OCEANS OF OPPORTUNITIES



I'M EXCITED TO PLAY MY PART AND CONTRIBUTE TO SINGAPORE'S VISION OF A **FUTURE-READY** MARITIME HUB!

**LIM TZER JING, 27**  
ASSISTANT MANAGER  
SINGAPORE TERMINAL 1  
PLANNING DEPARTMENT,  
PSA CORPORATION LTD



**1 KEEP LEARNING AND ADAPTING**  
The industry is always evolving because of new and exciting port technologies.

**2 EFFECTIVE COMMUNICATION**  
Co-workers may be older or have different communication styles.

**3 SOFT /PEOPLE SKILLS** These help you work well as part of a team.

**4 RESILIENCE** If you face failure, keep going. Reflect on what went wrong to cope better in the future.

**5 WORK SMARTER, NOT HARDER**  
You'll get more done in less time.

## PRE-SHIPPING

# 1

Coffee chain runs low on its most popular Arabica coffee beans and places an order with a coffee exporter in Yunnan, China.



**FREIGHT FORWARDER (SEA)**  
Acts as an agent for the exporter in moving cargo to the overseas destination, and advises on freight costs.

**MARINE INSURANCE UNDERWRITER**  
Determines degree of risks and ensures cargo owners are protected from unforeseen losses and incidents.

# The amazing journey of COFFEE BEANS

SHOWCASING THE **BEST VOCATIONS** FROM THE SHIPPING INDUSTRY.

## SHIP AGENT

Monitors ship arrivals and departures.  
Processes all formalities and declarations to ensure the smooth entry and departure of ships.

## HARBOUR PILOT

Provides pilotage and berthing services to ships entering and departing the port.

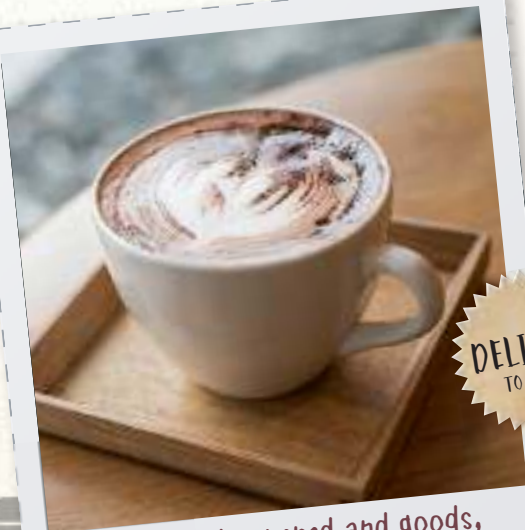
## EQUIPMENT ENGINEER

Oversees the maintenance and servicing regime of port equipment.



# 6

Cargo is trucked to distribution centre.



**DELIVERY TO CLIENT**

Container is opened and goods, such as the Arabica coffee beans, are sent to respective clients.



2

Coffee beans are packed into a container, and shipment is arranged.

#### SHIPPING CLERK

Handles cargo documentation and shipment records. Also liaises with regulatory authorities on cargo clearance.

#### CHARTERING EXECUTIVE

Ensures ships deliver cargo safely in the most cost-effective manner through the negotiation of shipping rates.

#### PORT OPERATIONS SUPERVISOR

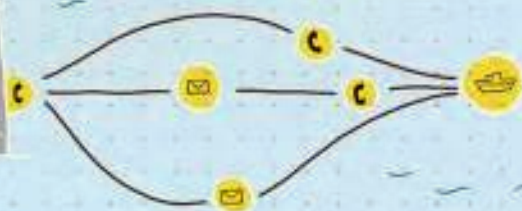
Oversees the planning and sequencing of cargo loading or unloading from ships.

#### SHIP OPERATOR

The communication link between the ship's crew, movements of cargo, and transfer operations. Also plans cargo intakes.

3

Loading of coffee beans onto a container vessel.



SHIPPING

#### SHIP CAPTAIN

Ensures safe navigation of the ship and well-being of crew members. Also supervises the loading and unloading of cargo.

#### CHIEF ENGINEER

Maintains and operates all mechanical and electrical equipment on board the vessel, specifically all activities in the engine room.



ARRIVAL  
AT DESTINATION PORT

5

Vessel berths at destination port.

4

Vessel is bound for destination port.



**FUN FACT...** Things that do not fit in a container can be classified under general or bulk cargo. Some examples of such cargo include steel, cement, sugar, crude oil and even MRT trains!



# IT'S A GIRL'S WORLD, TOO!

TWO WOMEN IN THE SHIPPING  
FINANCE SECTOR TALK ABOUT THEIR  
FAVOURITE PARTS OF THEIR JOBS  
AND THE CHALLENGES  
THEY FACE.

## IVY'S TOP TIP

If you have an internship  
opportunity with a shipping  
company, take it on. Instead  
of focusing on one area,  
you'll learn about other areas  
of the maritime industry,  
which is very exciting!

## JACKIE'S TOP TIP

Be open minded. You may not  
know which job really suits  
you until you try your hand at  
one in the maritime industry.

JACKIE LAN, 29  
EXECUTIVE,  
UNDERWRITING (HULL)  
ARE INSURANCE (SINGAPORE)

IVY LUM, 34  
VICE PRESIDENT  
HSN NORDBANK AG



IVY

Hi Jackie! 🧑 Tell me about yourself and what you do. 🤖

JACKIE

Hey Ivy! 🧑 I've been an underwriting executive at QBE Insurance (Singapore) for over two years. I got my honours degree in maritime studies on a scholarship. After graduating, I was a management trainee with the scholarship provider – a ship management company – for a year. The job required a lot of technical background, and I realised that ship management wasn't for me. I joined the insurance sector after that.

What about you? What brought you to this industry?

IVY

I was a 🧑 graduate trainee too.

I had an electrical and electronic engineering degree but hopped into the finance industry by chance. I joined Mizuho Bank as I speak Japanese. My team covered several industries, including shipping 🚢 and oil trading. In 2007, the ship-financing activities grew, so my then-boss and I set up the bank's shipping desk. Initially, I didn't want to join the shipping team. But, to my surprise, shipping's been fun! I'm now a ship financier at HSH Nordbank and have been here for three years.

JACKIE

Yeah, shipping is fun, right? After my A levels in 2008, I worked part-time in a freight forwarding company. Back then, the shipping industry was vibrant and doing well. 🇸🇬 is a maritime hub, so I knew there would be lots of opportunities. At that time, I didn't know that the shipping industry is so varied, but there are many different types of vessels and lots of work you can do. It's amazing! 🌈

IVY

Yeah! My sector has different products and facets too. As a ship financier, I lend 💰 to companies buying commercial ships.

Many people think we are only into numbers, but in today's market, technical knowledge is also essential for us to finance the correct project.

JACKIE

It's the same in insurance. People often think we sell life insurance like any other insurance agent, but that is not true!

As an underwriter, we provide protection to owners, who can't afford to lose their high-value vessels. We have to consider the many issues and risks involved. New regulations, vessel types and technologies also appear all the time. You definitely need to be an active learner 🧑 when you join the shipping industry!

IVY

Yep, the industry is challenging, but also interesting and rewarding. The best part of my job is working with my colleagues. Many of us hang out outside of work; we even take golf 🏌️ lessons and go on holidays together. 🌴🌊🏖️👨🏻‍🌾

JACKIE

I definitely agree that the people make it worthwhile. I ❤️ the "work hard and play hard" attitude. It's not just about work; you are sharing part of your life with these people. Because of this environment, work is not a chore. It's fun! 🤖

# THE REAL DEAL

IF YOU DON'T TRY, YOU WON'T KNOW IF YOU CAN SUCCEED.

## HER JOB IN A NUTSHELL

Her bubbly personality, can-do spirit and ever-present smile makes Emilie Teo a natural at her job. As an offshore broker, she helps clients find the right ship for their needs, such as ferrying supplies to offshore rigs. When the ideal vessel is chosen, Emilie assists her clients, the charterer and the shipowner in negotiating contract terms and signing of agreements. "Closing deals always gives me a sense of accomplishment," she says. "You spend so much time and effort trying to help both parties get the best out of the deal. When they finally sign it, it's like, I did it!"

## CLOSING HER FIRST DEAL

Because work can pop up at any time, Emilie needs to be always ready, even on weekends. That was when her very first deal took place. Remembering it vividly, she recaps how her director rang her up one weekend to find a barge for an urgent job offshore. After contacting numerous owners, Emilie managed to find a suitable and available barge. With her colleagues' guidance, she drew up the contract by herself and successfully closed the deal – all within a short time frame. She recalls: "The best part was, the client was happy!"

## OVERCOMING CHALLENGES

Yet, working in the shipping and offshore industry can be a little challenging, Emilie reveals. The low price of oil and market oversupply has reduced demand for offshore ships these days. But she keeps positive and is optimistic that things will pick up. With a smile, she adds: "You need to be tough and keep pushing through. You can't give up!"

## EMILIE'S TOP TIP

Don't be motivated by money; you must actually like the job!



EMILIE TEO HUI FANG, 24  
OFFSHORE BROKER,  
M3 MARINE GROUP  
(SHOT ABOVE TAKEN @ KIM HENG SHIPYARD)

## 5 BEST SKILLS TO HAVE

- \* Good product knowledge
- \* Perseverance
- \* Able to work hard but effectively
- \* Know your maritime contract terms
- \* Excellent communication skills

## HER CAREER TIMELINE

**2012**

- \* Interned with M3 Marine Group.

**2013**

- \* Joined M3 as a management trainee.

**2014**

- \* Received Diploma in Maritime Business from Singapore Polytechnic.

**2015**

- \* Earned BSc in Maritime Business & Maritime Law from Plymouth University, UK
- \* Joined M3 as a Junior Offshore Broker.

**2016**

- \* Promoted to Offshore Broker.





## "MY MOST MEMORABLE DEAL WAS THE FIRST FIXTURE I CONCLUDED..."

"My supervisor, Captain Vikas, gave me a pat on the back and told the other captains that I should treat them to coffee because I'd made the deal on my own. It felt like scoring a goal in a match - very satisfying!"



**HAZREEN'S TOP TIP**  
Be gracious in sharing and receiving knowledge. It opens up opportunities otherwise unbeknownst to us.

# ANSWERING THE CALL



MUHAMMAD HAZREEN  
M HAFFIS, 28  
CHARTERING &  
OPERATIONS EXECUTIVE,  
AURORA TANKERS MANAGEMENT

“

I was in the Police Coast Guard during National Service. When I was out at sea, I was wowed! It gave me an indescribable feeling, which I still enjoy today. So I believe this is my calling. After I received my Bachelor of Science (Honours) in Maritime Studies at Nanyang Technological University, I started work as a management trainee at IMC in 2014. Two years later, I joined Aurora Tankers Management, an IMC subsidiary.

### Finding business for ships

My job is to find cargo for the ships I'm responsible for and ensure they are always employed. I talk to brokers every day – they are the link between us, the ship owners and the cargo owners. While customers will try to lower the freight rates, we need to make a certain profit margin for ourselves. This negotiation process can be stressful – we have to answer to our bosses if it doesn't work out. It's a fine balance, but I enjoy it!

### Tackling a difficult challenge with solid advice

I'm very lucky to work with my supervisor, Captain Vikas Chaudhri, who supervised me when I was an intern at IMC. I'm learning a lot from him and he gives me many opportunities to develop myself. One challenge I face is that I don't entertain because of my faith. I was worried it would put me at a disadvantage, but Captain Vikas reassured me, saying entertaining is just one aspect. What's important is getting the job done and being knowledgeable about the work!

”

5

INGREDIENTS  
FOR

SUCCESS

- 1 INTERPERSONAL SKILLS
- 2 CREATIVE PROBLEM-SOLVING SKILLS
- 3 TECHNICAL KNOWLEDGE OF SHIPS
- 4 BEING COMFORTABLE WITH NUMBERS
- 5 A WIDE NETWORK OF BUSINESS CONTACTS AND FRIENDS

# ALL Tied up

HOW TO TIE THREE MARITIME KNOTS



The bowline knot is used to secure the end of a line. Because it will not slip, it is very useful in docking situations and can be easily untied.

1. Your rope should be secured at one end and loose at the other.
2. Loop the loose end over itself.
3. String the loose end through the loop, under then over.
4. Pull the loose end around the back of the secured line.
5. Bring the loose end back through the loop, over then under.
6. To tighten, pull on the loose and secured ends.



1. & 2.

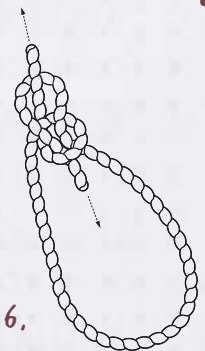


3.



4.

## [ The bowline knot ]



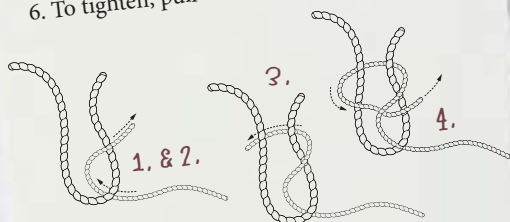
5. & 6.





The sheet bend knot joins two different ropes together and is most ideal if the lines are of unequal size.

1. In each hand, hold the loose ends of two different ropes.
2. Make a loop using one line.
3. Cross the other line through the loop, under then over.
4. Wrap around the back of the loop.
5. Pass the end down to thread it over the loop line, under itself, and back over.
6. To tighten, pull the knot.

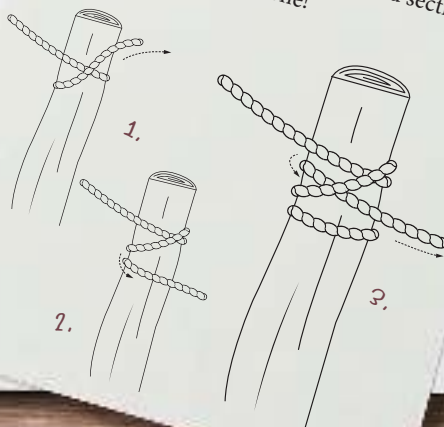


## [ The sheet bend knot ]

## [ The clove hitch knot ]

This knot is helpful in situations involving a piling or rail. It is especially useful in securing fenders to a railing. The knot is easy to adjust and untie, but becomes stronger when the line is pulled on.

1. Wrap a rope behind a stationary piling or rail.
2. Cross the line in front at the top, then wrap it around the piling once more.
3. Bring the end under the crossed section, pull tight and it's done!



## DESIGN & PLANNING PHASE

1

Basic vessel design based on clients' requirements and/or market research.



### NAVAL ARCHITECT

Designs and oversees the construction of ships to ensure that they are safe and efficient, and fit the requirements set by clients, classification societies and other organisations.

2

Promotes shipyard's expertise and develops its strategies. The bidding for the shipbuilding project commences.



## SALES & MARKETING PHASE



# WHO DOES WHAT, WHERE?

HERE'S A CLOSER LOOK AT THE SHIPBUILDING PROCESS AND ITS EXCITING VOCATIONS!

9

After the vessel is named and delivered, the captain, chief engineer and crew embark on the ship's maiden voyage.

## DELIVERY OF VESSEL



8

To ensure the smooth operation of the vessel in preparation for its delivery, systems and installations are tested on board, and sea trials are conducted.

### STRUCTURAL WELDER / SOLDERER / CUTTER

Tasked to use welding filler metals and welding processes to perform structural and/or pipe welds in all phases of a ship's construction.

## TESTING & COMMISSIONING PHASE





### SALES & MARKETING MANAGER

Bids for shipbuilding projects and liaises with shipowners on the specifications and costing of a project.

### COMMERCIAL MANAGER

Oversees cost estimation and tendering of projects. Tracks the project's progress as stated in the contract agreement.

## ORDER CONFIRMATION PHASE

3

Shipbuilding yard clinches deal with client, who confirms vessel specifications. The project is then handed to the Project Manager.

### PROJECT MANAGER

Oversees the multi-disciplinary project team (shipbuilding, mechanical engineering, planning, logistics, and contracting) and handles all of the shipbuilding project's technical issues.

### PROJECT ENGINEER

Manages vessel building and installation structures. Ensures that the final product meets the client's requirements and regulation standards. Leads a team of engineers and technicians as elaborated below.



The Project Manager, Project Engineer and Naval Architect work as a team to finetune and customise the vessel's designs, according to the client's needs.



## BUILDING & PRODUCTION PHASE

6

Steel plates are cut into parts that will form the hull side shells, bulk heads and deck sections.

7

General technicians fully assemble the outfit components into a small unit.

### PIPING TECHNICIAN

Installs, repairs and maintains pipes, fixtures and other plumbing equipment.

### ELECTRICAL TECHNICIAN

Connects light fittings and other electrical connections in a ship. Installs various safety instruments and the overall wiring of the ship.

4

In order for the ship to move with maximum speed, hull design, including structure design and fatigue strength analysis, is assessed to test its capabilities.

5

Engineers work on machinery and outfitting design, including the main engine, propulsion system and cabins, with the Engineering Design Office and the Production team overseeing all safety aspects of the project execution.

### PIPING ENGINEER

Refines the design of the layout of the piping systems.

### ELECTRICAL ENGINEER

Refines the design and routing of the power and signal cables.

### MECHANICAL ENGINEER

Performs feasibility checks of various machinery.



**FUN FACT...** Singapore is the top ship-refuelling port in the world. The amount of fuel it provided in 2015 was enough to fill more than 17,000 Olympic-sized pools.

Ivan Lim's life has always revolved around the sea. When he was a boy, he would follow his father, a fishmonger, to the wholesale fish market at Jurong Fishery Port. He also dreamt of becoming a marine biologist.

So why did he become a marine engineer? Well, he didn't like the idea of being the only male in his class at polytechnic. He also felt being in marine engineering would help him get over his fear of water, which he has since successfully overcome!

### AN INSPIRING ATTITUDE

Today, Ivan is a General Manager of Operations at Keppel Shipyard. His wide work scope includes managing the Tuas and Gul shipyards for Keppel, maintaining customer relationships and getting the best returns for his company.

What he relishes is interacting with people from all walks of life in a dynamic industry. He says: "I have a greater responsibility to influence people and their lives. While we provide better jobs and livelihoods to our staff, our solutions also benefit many others worldwide. This really excites me!"

He also enjoys the daily challenge of juggling different issues – from quick turnaround schedules to fluctuating oil prices – that can shape his projects. He shares: "Finding the best solutions keeps me on my toes."

Ivan, who keeps an aquarium as a hobby, has this advice for those harbouring an interest in a maritime career: "Staying positive is a must in this fast-paced industry. I stay positive by finding a benefit, even in adversity."



# MAKING A

## CHARTING HIS MOVES



**1994**

Joined Keppel Shipyard on a company scholarship to study for a marine engineering diploma.



**1998**

Completed his studies and was awarded The Chua Chor Teck Gold Medal for being one of the top four graduates of his cohort.



**2001**

Started work as an Assistant Engineer in the machinery department at Keppel Shipyard.

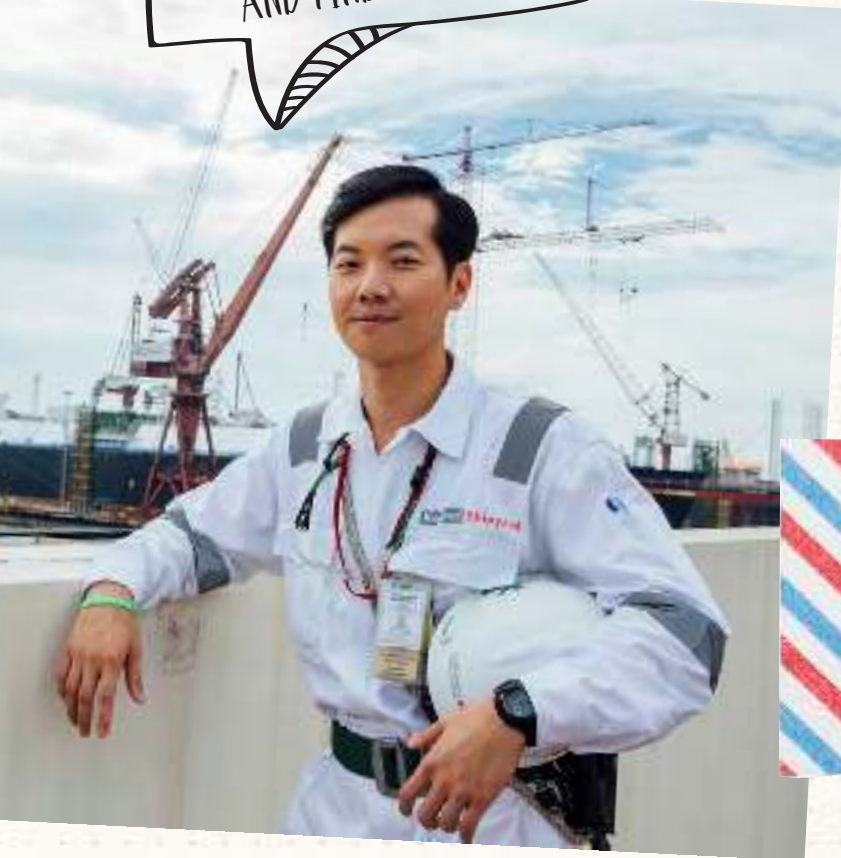


**2002**

Awarded the Keppel Group Scholarship. Studied marine engineering at the University of Newcastle upon Tyne (UK).



ALWAYS ASK WHEN IN DOUBT,  
AND BE EAGER TO LEARN  
AND FIND OUT MORE!



## HOW IVAN ACES THE JOB

\*\*\*\*\*

Accepts responsibility  
for his actions

\*\*\*\*\*

Confronts his fears  
and takes positive action

\*\*\*\*\*

Stays positive and finds a  
benefit in every adversity

\*\*\*\*\*

Has good interpersonal and  
networking skills

\*\*\*\*\*

Has a service mentality and always  
goes the extra mile

\*\*\*\*\*

Is humble and doesn't forget  
his beginnings

# SEA CHANGE



**2005**

Graduated with  
First Class Honours  
and various other  
distinctions.



**2010**

Seconded to  
Qatar's Nakilat-Keppel  
Offshore & Marine  
Shipyard as Assistant  
General Manager  
(Operations).



**2012**

Received an  
Outstanding Keppelite  
Award for his  
outstanding work  
performance.



**2013**

Became President  
of the Keppel Young  
Leaders (KYL) platform.



**2014**

Promoted to General  
Manager (Operations)  
at Keppel Shipyard.

## HIS CAREER TIMELINE

### JUNE 2008

- \* Graduates from NTU and joins Sembcorp Marine as part of his Association of Singapore Marine Industries (ASMI) scholarship.
- \* Starts as an engineer in the Staging, Painting and Cleaning department.

### JULY 2010

- \* Moves to the Project Manager's Office as a Ship Repair Manager.
- \* Starts studying part-time for his Master of Science in Civil Engineering (Offshore Engineering) on a Sembawang Shipyard Scholarship at the National University of Singapore.

### JULY 2012

- \* Becomes an Assistant Project Manager in the company's Technology Development Solution division.

### JULY 2014

- \* Promoted to Sales & Operations Manager.

### JULY 2015

- \* Takes up Commercial role at New Products department.

IF YOU'RE KEEN ON SOLVING PROBLEMS, ENJOY MEETING PEOPLE, AND LOVE THE SUN AND THE SEA, THIS JOB IS FOR YOU!



**KEVIN'S TOP TIPS**

**HOT** in the hands    **WARM** in the heart    **COOL** in the head

- Remembering the advice of his Officer Cadet School commander



**FUN FACT...** Today, more than 5,000 maritime establishments contribute about 7 per cent to Singapore's gross domestic product and employ over 170,000 personnel.

# BUILDING A GREEN FUTURE

KEVIN LIM  
WOON CHEONG, 33  
SALES & OPERATIONS  
MANAGER, REPAIRS & UPGRADES,  
SEMPACORP MARINE

Ever since he was a young boy, Kevin has always been fascinated with machines. He enjoyed putting together battery-operated toy cars and playing with remote-control cars. As he got older, his love for tinkering with machinery grew. So much so that he pursued a Bachelor of Mechanical Engineering course, specialising in marine and offshore engineering, at Nanyang Technological University (NTU). "When I interned at Singapore Petroleum Company, I had to do maintenance work on engine blocks. I was so happy because I got to get my hands dirty!" he says, with a laugh.

## A DEEPER UNDERSTANDING

Today, tinkering and fixing remains his inspiration. His work in the Sembcorp Marine Repairs & Upgrades, New Products department, involves offering green technology solutions to ship owners. These fixes help ships become more environmentally friendly, run more efficiently and, in turn, save costs.

Kevin's favourite part of his job is travelling, meeting customers and attending conferences in countries like Sweden, China and the United States. On these trips, he learns and is inspired by what others are doing in the pursuit to be more earth-friendly. "Singapore is starting to look into renewable energy solutions and working towards clean energy alternatives in ports and shipyards. In the future, I won't be surprised to see battery-powered vessels, such as all-electric emission-free ferries, operating here," he says.

Working in such a fast-paced, complex job that requires one to multi-task is no mean feat, but Kevin relishes the challenge. He remarks: "Working under positive stress gives me an adrenaline rush every time! The camaraderie and support from my colleagues keeps me motivated. I'm also inspired by the meaningfulness of my work and finding solutions for a sustainable future."

WHAT DO  
YOU NEED TO  
SUCCEED  
?

GOOD  
TIME  
MANAGEMENT

QUICK  
THINKING

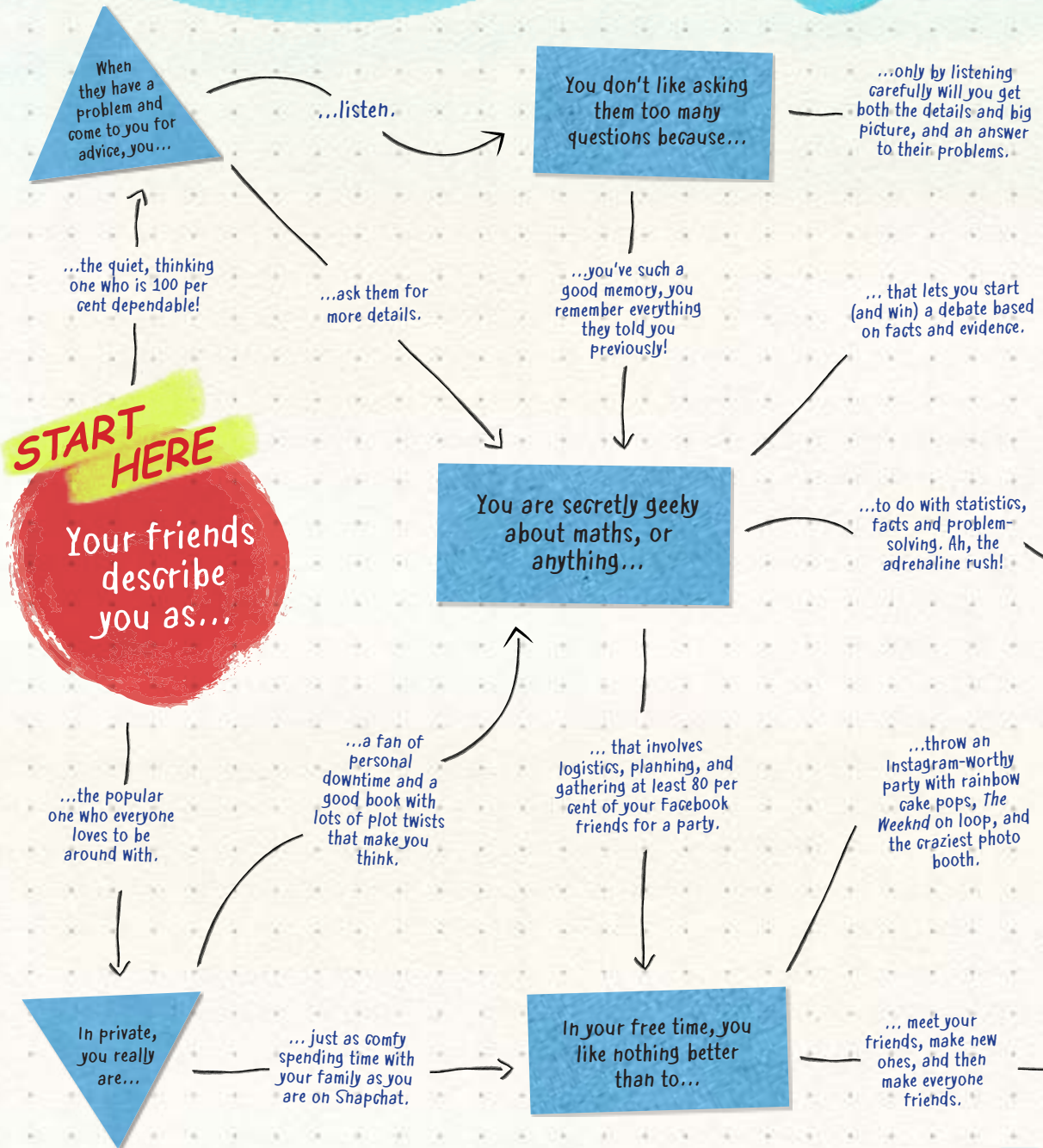
GOOD  
COMMUNICATION  
SKILLS

PERSEVERANCE

BOLDNESS  
Never be  
afraid to  
learn from  
mistakes.

# Which CAREER

will you make WAVES In?







I could be a

This list is not exhaustive. Please scan this QR code to watch some videos about maritime careers.



Good  
ANALYTICAL  
skills

**Marine Surveyor,**  
who conducts marine surveys on vessels to ascertain the condition of their hulls, machinery and equipment.

**Naval Architect,**  
who works with a team of engineers to design, build and repair vessels and offshore structures.

Good  
NEGOTIATION  
skills

**Maritime Lawyer/Arbitrator,**  
who advises on contracts and in disputes, drafts legislation, and aids clients on ship finance matters.

**Charterer,**  
who liaises with shipowners or chartering brokers to make sure that their cargo arrives safely and in the most cost-effective ways.



Good  
NUMERACY  
and PROBLEM-  
SOLVING  
skills

**Ship Finance Associate,**  
who provides a wide range of ship finance services to maritime companies; for example, helping clients secure funding for a vessel.

**Marine Superintendent,**  
who oversees the safe operation of ships, crew management matters, ship budget, and expenditure.

**Ship Operator,**  
who prepares and monitors vessel schedules and port activities, and handles problems that may arise in the course of executing ship operations.

1 2 3  
4 5 6  
7 8 9

Good  
ORGANISATIONAL  
and  
PLANNING  
skills

**Ship Planner,**  
who manages the performance of a vessel and maximises the profitability of a voyage.

**Project Manager,**  
who oversees and ensures that projects are executed and completed within deadlines, budget, safety compliance and clients' specifications through a team.



Good  
COMMUNICATION  
and  
INTERPERSONAL  
skills

**Shipbroker,**  
who keeps up to date on market research and trends so that I can advise clients on how best to buy and sell vessels.

**Harbour Pilot,**  
who works closely with key stakeholders like Port Masters and port management personnel to manage port operations and berthing activities.



Which one  
should I  
choose?

Maritime  
courses *in*



# Singapore

Diploma and Higher NITEC courses



SMA  
Singapore Maritime Academy  
SINGAPORE POLYTECHNIC

- Diploma in Maritime Business
- Diploma in Marine Engineering
- Diploma in Nautical Studies

- Diploma in Marine and Offshore Technology



NGEE ANN  
POLYTECHNIC

- Higher Nitec in Offshore & Marine Engineering Design
- Higher Nitec in Marine Engineering
- Higher Nitec in Maritime Business
- Higher Nitec in Marine & Offshore Technology



Institute of Technical Education



## Degree Courses



**NANYANG  
TECHNOLOGICAL  
UNIVERSITY**  
SINGAPORE

- Bachelor of Science (Hons) degree in Maritime Studies with or without Business Major
- Bachelor of Engineering (Mechanical Engineering) with specialisation in Naval Architecture and Marine Engineering



- Bachelor of Engineering (Civil Engineering) with specialisation in Offshore Engineering
- Bachelor of Engineering (Mechanical Engineering) with specialisation in Offshore Oil and Gas Technology



**SMU**  
SINGAPORE MANAGEMENT  
UNIVERSITY

- Bachelor of Science in Economics, with Maritime Economics Track (MET)



- Bachelor of Engineering (Hons) in Marine Engineering
- Bachelor of Engineering (Hons) in Naval Architecture
- Bachelor of Engineering (Hons) in Offshore Engineering



## Postgraduate programmes



**NANYANG  
TECHNOLOGICAL  
UNIVERSITY  
SINGAPORE**

- Master of Science in Maritime Studies
- Master of Science in Mechanical Engineering, with specialisation in Naval Architecture & Marine Engineering

- Master of Laws in Maritime Law
- Graduate Diploma in Maritime Law and Arbitration



## Earn and learn programmes

**SINGAPORE  
POLYTECHNIC**

**SP**

- ELP for Maritime (Seafaring Deck Officer)
- ELP for Maritime (Seafaring Marine Engineer)
- Specialist Diploma in Port Management and Operations

- Specialist Diploma in Marine Production
- Specialist Diploma in Marine Design



Photo courtesy of SkillsFuture Singapore

don't limit  
yourself  
to maritime  
courses

Other possible Fields of study for a maritime career:

- Accountancy
- Arts & Social Sciences
- Business Administration
- Economics
- Information Technology
- Law
- Logistics

Note:

Non-maritime academic qualifications are applicable for some vocations that do not require technical expertise. The disciplines listed above are by no means exhaustive.



www.sgmf.com.sg/scholarship

SME Singapore Maritime Foundation

# MaritimeONE SCHOLARSHIPS



SCHOLARSHIPS

ABOUT US

OUR SCHOLARS

CONTACT US

## MaritimeONE Scholarship

The MaritimeONE Scholarship is an initiative spearheaded by the SME and its maritime partners. These sponsors have pledged their commitment to the scholarship programme by providing the funding for scholarships and offering possible job opportunities in their companies for these scholars.

Through this scholarship, SME and its maritime partners hope to attract young talents into the maritime industry. We hope to encourage more students to come forth to enroll in maritime-specific courses and to pursue a maritime career when they enter the workforce.

The scholarships will cruise you into an exciting journey into the maritime industry offering challenging careers with great prospects.

**APPLY NOW**

Contact us  
[scholarship@sgmf.com.sg](mailto:scholarship@sgmf.com.sg)

# [ WE EXPLORE ]

FOUR BRIGHT SPARKS REFLECT ON  
THEIR LIFE-CHANGING JOURNEYS AS  
MARITIMEONE SCHOLARS



Mun Yong Jian added 2 new photos to the album  
My PIL – MaritimeONE Scholarship story

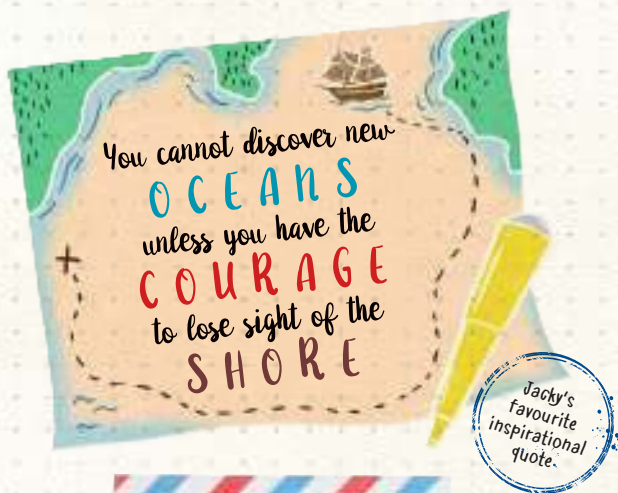
Pursuing a maritime studies degree at Nanyang Technological University allowed me to experience a five-month student exchange at BI Norwegian Business School in Oslo. During the school break, I even visited Iceland and Egypt! I love how the industry offers opportunities to gain experience overseas. I was mentored in PIL's Shanghai office under the Maritime Port Authority's Global Internship Programme. Even now, PIL offers a variety of international postings and encourages us to attend short-term attachment programmes overseas to enrich ourselves.



Like

Comment

Share



Jacky

He's the one in glasses!



Jacky S/O Narayan Kishinchand

About

Overview

SMA – MaritimeONE Scholar

Graduated from Plymouth University with a first class honours degree in maritime business and logistics

Graduated from Singapore Polytechnic with a diploma in maritime business

Education

After poly, I wanted to deepen my understanding of the maritime industry and study at a reputable foreign university. I chose Plymouth University because it has a strong tradition in maritime education and conducts courses accredited by the Institute of Chartered Shipbrokers and Chartered Institute of Logistics and Transport.

Scholarship benefits

The SMA – MaritimeONE scholarship made a huge impact. It provided much-needed financial aid, allowing me to pursue my ambition. My career path might have been different without it, due to the costs of studying at Plymouth.

Career today

My role as Operations Manager at Oldendorff Carriers is vibrant and dynamic. It never fails to thrill me, knowing that my vessels carry about 200,000 tons of cargo in each shipment and that I've been an integral part of making that happen safely.





Muhamad Fareez Haris added a new photo to the album  
My journey as an SMA – MaritimeONE scholar

I graduated with a diploma in nautical studies from Singapore Polytechnic. To be honest, sailing is not for everyone. It can be tough and gruelling. Yet, it is truly an enriching journey for those who can rough it out! To be a captain at the top commanding the whole vessel – that's the job for me.



Like Comment Share



Muhamad Fareez Haris added 2 new photos to the album  
To the ones who have supported me through thick and thin

The scholarship provided me with good financial support and opportunities. I've met many people who've influenced my career path. I also want to thank the Second Cook, who made cheesecake for my 20th birthday! And of course, where would I be without my family?

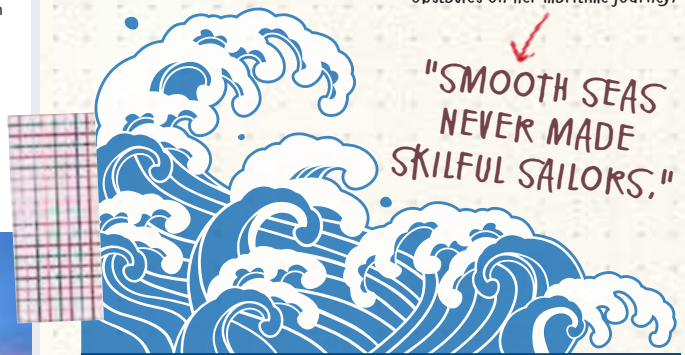


Like Comment Share

Prepare for today,  
TODAY.  
Worry about tomorrow,  
TOMORROW.

A quote that inspires Fareez.

Yvonne says she picked up valuable lessons by overcoming different obstacles on her maritime journey.



Yvonne



Yvonne Wiu Xuan Lin

"Big, happy smiles with my classmates at Newcastle!"

About

#### Overview

ABS – MaritimeONE Scholar

Graduated from Singapore Institute of Technology with a degree in engineering with honours in marine engineering

Graduated from Singapore Polytechnic with a marine engineering diploma

#### Education

My course included a one-month Overseas Immersion Programme at Newcastle University in the United Kingdom. When I was there, my interactions with the British students were an eye-opener. We enjoyed a good cultural exchange.

#### Scholarship benefits

I attended many maritime activities that widened my understanding of the industry. Networking sessions also gave me opportunities to meet those working in the industry. Singapore Maritime Foundation's scholarship coordinators gave good career advice too.

#### Why I chose a maritime career

During my industrial attachment, I did machinery maintenance on ships and took an interest. My poly lecturers' stories about their sailing days also intrigued me. I like the job because the satisfaction after a hard day's work – when the machinery runs smoothly and when I'm out at sea looking at the beautiful view – makes everything worth it. I am now a Technical Service Engineer with Shell Eastern Trading.



# Question time

What do the experts say about pursuing a career in the maritime industry?



1

Re: Why is the maritime industry important? What does it have to do with me?

May 25, 2017

Hello!

The maritime industry is critical to many economies as it is the main form of goods transportation internationally. Many cities rely on their port(s) as a major source of revenue. In Singapore, the maritime industry contributes 7 per cent of the Gross Domestic Product since our economy is driven by import and export trade. The low-cost transportation of our daily needs and necessities – your clothes, shoes and mobile phones – is made possible through shipping.

Hope this sheds a little more light on the topic!

How can I start my own business in the maritime industry?

The industry is very knowledge intensive, so it will help if you understand how it works. You also need broad social and business networks; that only comes with experience. Stay connected with like-minded individuals to explore opportunities and kick-start your entrepreneurial journey.

2



2017-06-03 19:03:02

#01

**Junior Mint**  
**New member**

I am a Science student in junior college (JC). I am keen on pursuing a maritime career, but my course of study does not relate to the industry. Are there any other jobs that I can consider?

Offline



2017-06-03 20:05:12

#02

**Jack Sparrow**  
**Member**

The beauty of the maritime industry is that it is extremely diverse and dynamic. You don't have to be maritime-trained to be part of it, and most skills are acquired on the job. What matters is interest, passion and willingness to learn. You can also consider studying at our local universities and polytechnics. They offer many maritime-related courses to bring you a step closer to your maritime career!

Online



Yes, when a ship is docked, seafarers may be issued a shore pass with which they can go ashore and tour the city. Some countries even offer tours for seafarers on short stays or transit calls. But the granting of a shore pass should not be mistaken for a vacation. Seafarers should only visit the city during their rest hours.

*Can a seafarer visit the city that their vessel docks at?*



Are there any R&D opportunities within the maritime industry?

**CAREER ADVISOR**

Many research and innovation centres have been set up at Institutes of Higher Learning and by companies. So, opportunities abound for those with a passion for research and development. For instance, researchers have created an anti-fouling hull coating to prevent marine bio-fouling, a phenomenon that occurs when marine growth, such as barnacles, accumulates on marine vessels and damages their hulls and propulsion systems.



2017-06-05 07:22:56

#23

**WaveProf001**  
**Member****Curiousgirl wrote:**

I've always been keen on ships, but am torn between JC and polytechnic. My parents say marine engineering is a dirty, male-dominated field. They'd prefer that I work 9-5 in an office.

Working in a shipyard or engine room is tough, and the sector is indeed male dominated. But in recent years, more women have joined the field. If concerns about the working environment are holding you back, consider your options carefully. Can you see yourself working in a shipyard or on board a ship? You must make this choice yourself. If a maritime career is what you want, explain to your loved ones that you understand their concerns but that these are challenges you alone must face.

Online



#maritime\_merrytime #maritime #maritimesg #shiplife #sea #seafarer #iluvsg #ship #shippingworldwide #shipping

Lim Zheng Tai, 22, Deck Cadet, APL



"It's all smooth sailing when I'm at the controls."

Joshua Chua, 22, Deck Cadet, CMA CGM



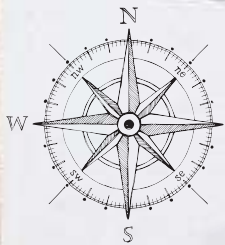
"SUN, SEA, SUPER CONTAINER SHIP! What an epic wifie with my mates on board!"

WORKING IN THIS  
**AWESOME**  
INDUSTRY,  
OUR  
**MARITIME**  
**JOURNEY**  
NEVER STOPS

Lee Quah De, 24, 4th Engineer, APL



"Reporting for duty from the starboard side of my lifeboat, off Andalusia's stunning coastline."



Alicia Tan Weiping, 27, Marketing Manager, Martins Marine



"Spending time on a ship always puts a big smile on my face - I LOVE SHIPS SO MUCH!"



Angelia Ong, 23, Senior Executive, Jurong Port



"A beautiful moment at the Raffles Marina lighthouse."



# SEA LOVERS UNITE!

Ong Nwee Song, 27, Hull Engineer, Keppel Shipyard



"Off to my convocation ceremony...  
WISH ME LUCK!"

## FUN FACT...

A large cruise ship requires between one and two million gallons of fuel - enough to fill more than 60,000 sedans.

Ivy Heung, 22

Operations Executive, Linfo Shipping Asia



"Rare chance for me to enter the ballast tank - felt like a mudskipper!"



# BIG DAY OUT

MARITIMEONE SCHOLARS EXPLORE THE NEWLY REFRESHED SINGAPORE MARITIME GALLERY, AND FIND THERE'S LOTS TO DISCOVER...



These models of Singapore's oldest lighthouses are impressive!



Wow! These 14th-century ceramic artefacts show the dawn of Maritime Singapore.



It's amazing to see how the trading of our daily commodities has evolved over the last 600 years, including the packaging...

We have just begun our visit and already the gallery offers many interesting exhibits in an interactive and experiential setting.



Wow! Imagine standing in a real 20-foot container.

We can't wait to try out one of the gallery's highlights - the Ship Handling Simulator. It's a very realistic simulation of a ship bridge, where we have to steer a vessel under various conditions to complete missions.



Better make sure I don't crash my vessel!



Hmm... Which vessel in the Singapore Strait should I pick on the augmented reality Interactive Ship Spotter?



Singapore, the world's top bunkering port, has been setting high standards since the 1990s.

Almost an hour spent at the gallery but it doesn't feel like it. We've learnt how Maritime Singapore has grown from a small trading post to a premier global hub port.

**SINGAPORE MARITIME GALLERY**

Marina South Pier, Level 2,  
31 Marina Coastal Drive,  
Singapore 018988  
Tel: 6325 5707  
E-mail: [smg@mpa.gov.sg](mailto:smg@mpa.gov.sg)  
Website: [www.maritimegallery.sg](http://www.maritimegallery.sg)  
Opening hours: Tuesdays to Sundays,  
9am to 6pm; closed on Mondays  
(except for public holidays)  
ADMISSION IS FREE!







## CONNECTING FOR MARITIME OPPORTUNITIES

Diverse and dynamic, the Singapore maritime industry has much to offer those seeking a rewarding career.

To elevate profiling efforts of the maritime industry and provide Singaporeans with easy access to maritime careers, education and training opportunities, the Maritime Singapore Connect (MSC) Office was set up in 2016 by the Maritime and Port Authority of Singapore.

The unit under the Singapore Maritime Foundation serves to connect students and jobseekers with the multiple pathways to the maritime industry.

Internships, jobs, scholarships, management associate programmes, train-and-place programmes, maritime course options --- these are but some areas that the MSC Office comes in to work with individuals and Singapore maritime companies on.

The MSC website is also a channel for those seeking internships or jobs, and companies looking to identify talent, to leverage on, while providing a holistic overview of the industry and the options available. All services on the site are free.

To find out more,  
visit [maritimesgconnect.com](http://maritimesgconnect.com) or email [mssc@sgmf.com.sg](mailto:mssc@sgmf.com.sg)

### Maritime Singapore Connect (MSC) Office

#### Singapore Maritime Foundation

120 Cantonment Road #02-01, Maritime House Singapore 089760

T: 6325 0225 F: 6325 4050 E: [mssc@sgmf.com.sg](mailto:mssc@sgmf.com.sg)

[www.sgmf.com.sg](http://www.sgmf.com.sg)

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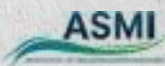
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