

Module Synopsis and Duration for CCP for Sea Transport Professionals and Associates – Singapore Polytechnic

No	Module Title	Duration (hr)	Outline
1	Basic Tanker Training – Oil, Chemical and liquefied Gas Tankers	75 hours	The course is designed to meet the training requirements of paragraph 1.2 of Reg.V/1 of STCW, which is applicable to persons who are likely to be assigned specific duties and responsibilities related to cargo or cargo equipment on board any tanker. The course introduces the participants to the possible dangers to human life and the environment from accidents involving tankers carrying petroleum, liquid chemicals or liquefied gas cargoes in bulk. The course also familiarises participants with the layout, cargo handling equipment, systems and procedures on board different types of tankers, the characteristics and hazards of their cargoes, basic safety and emergency procedures, and pollution prevention.
2	LNG Bunkering Course (Management and Operational Level)	32 hours	The fundamental knowledge for a typical LNG bunkering operations, including the related corporate governance and management systems. Familiarity with the operation, calibration and maintenance of equipment and instrumentation, control and monitoring of bunkering operations, non-standard and emergency operations and related safety aspects.
3	LNG Bunkering Course (Support and Emergency Level)	16 hours	The fundamental knowledge for a typical LNG bunkering operations. Familiarity with the operation, calibration and maintenance of equipment and instrumentation, control and monitoring of bunkering operations, Non-standard and emergency operations and related safety aspects.
4	Shipping Industry Knowledge	14 hours	The purpose of the course is provide an overview of the Maritime and Shipping industry. The course also provides an easy understand of Shipping Business, Seaports and Cargo Handling, Logistics Management.
5	Maritime Superintendent & Shipping Landscape	60 hours	This module aims to provide a sound understanding of the roles and responsibilities of the maritime superintendent in ensuring the safe, economic and efficient operation of ships and offshore vessels assigned to him. Particular emphasis will be placed on the importance of ensuring that the ships are managed and operated in accordance with organisational policies, operating procedures and management systems. Students will also learn the macro business environment and knowhow to work with various stakeholders (staff onboard, regulatory authorities and customers) to achieve the business objectives.
6	Fleet and Technical Management	60 hours	Fleet management involved the skills of understanding how vessels are deployed so that they

			are gainfully employed. Technical management involves in the optimisation of the resource utilization to ensure vessels are maintained properly. Through this module, the students will be equipped with the skills and knowledge to utilise the tools and processes to manage the fleet effectively to ensure that the vessels maintained their seaworthiness. It also provide the students with an understanding of the principle of the various planned maintenance systems that are available in the industry (Time based, Condition Monitoring).
7	Maritime Regulations & Conventions	60 hours	IMO conventions and Port States Regulations formed the fundamental frameworks to ensure seaworthiness of the vessels and protect the environment. This module aims to provide students with the knowledge in ensuring that the team members on board the vessel are properly trained and monitored in accordance to the STCW (The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers). It will also provide the students with an overview on the various IMO conventions, Flag states and Port state regulations to ensure that vessels are managed to achieve the objectives of 'Safe Ships and Clean Seas'.
8	Maritime Legal & Financial Management	60 hours	The aim of this module is to provide the students with the knowledge and understanding of the legal framework, which covers the commercial aspect of ship operations and management. This include marine insurance, charter party, bills of lading, claims and dispute. Students will also be provided with an understanding and knowledge on financial management that involves the calculation of cash flow, costing, financial resource management and optimization. Cases of claims that have impact on ship management practices will also be incorporated in this module.
9	Health, Safety, Security, Environmental & Quality Management	60 hours	<p>This module aims to provide students with a thorough knowledge and understanding of the shipping business of Health, Safety, Security and Environment (HSSE). The students will learn to interpret the various maritime codes and conventions that affect ship operations and management.</p> <p>This module will also help the students to develop an understanding of the Quality and Environmental Management Systems that form an integral part of the workflow in vessels management and operations. The students will learn how to use the tools and techniques in handling incidents that will provide them with the knowhow in dealing with problems effectively in fleet management</p>

10	Effective Maritime Communications Course	16 hours	<p>The IMO SMCP replace the Standard Marine Navigational Vocabulary (SMNV) which was developed for use by seafarers, following agreement that a common language - namely English - should be established for navigational purposes where language difficulties arise. The IMO SMCP has been developed as a more comprehensive standardized safety language, taking into account changing conditions in modern seafaring and covering all major safety-related verbal communication.</p> <p>The purpose of the course ICS is to provide ways and means of communication in situations related essentially to safety of navigation and persons, especially when language difficulties arise.</p>
11	Marine Crisis Management & Emergency Response Course	16 hours	<p>This course is designed to meet the mandatory minimum requirements for the training of masters, chief engineers, chief mates, second engineer officers and any persons having responsibility for the safety of passengers in emergency situations aboard passenger ships. The course is approved to meet all the requirements under STCW convention Chapter V, Section A- V/2 para 4. In emergencies it is crucial that the right decisions are taken.</p> <p>This course introduces methods which allow controlled decision-making under the conditions of great stress. The principles of crisis management are imparted and discussed in case studies and role plays.</p>
12	Management, Energy Efficient Operation of Ship Course	16 hours	<p>In 2011, IMO adopted by resolution MEPC.203(62), a suite of technical and operational measures which together provide an energy efficiency framework for ships. These mandatory measures entered into force on 1 January 2013, as Chapter 4 of MARPOL Annex VI.</p> <p>This course aims to equip technical personnel with the theoretical knowledge and principles in the understanding of energy efficient operation of ships with a focus on ship management and operational issues to address GHG (Greenhouse Gas Emissions) from ships. With this knowledge, they can apply themselves effectively understand the shipboard engineering systems so as to broaden the scope of their job function and keep themselves abreast with the rapidly changing industry practices.</p>
13	Maritime Risk Management and Incident Investigation Course	16 hours	<p>This course aims to provide an in depth understanding of the basis of Maritime Risk Management and the investigation of incidents for all activities of the organization. Article 23 of the Load Lines Convention also requires the investigation of casualties. The Code requires a marine safety investigation to be conducted into every "very serious marine casualty", defined as a marine casualty involving the total loss of the ship or a death</p>

			or severe damage to the environment. This is relevant to the shipping industry where maritime casualties could happen and investigation plays a part to prevent reoccurrence.
14	Electrical Electronic and Control Engineering	16 hours	The Electrical Electronic and Control Engineering course is to familiarise participants with the knowledge of the various electronic and control components and instrumentation supporting the main power plant of a ship. With this knowledge, they can apply themselves effectively understand the shipboard engineering systems so as to broaden the scope of their job function and keep themselves abreast with the rapidly changing industry practices.
15	Propulsion Plant & Machinery	16 hours	This course is about the Propulsion Plant & Machinery of ship and the course is to familiarise participants with the knowledge of the various supporting machinery, equipment and systems for main propulsion. Essential knowledge on auxiliary machineries, boiler and main engine will be covered in the course. With this knowledge, they can apply themselves effectively to broaden the scope of their job function and keep themselves abreast with the rapidly changing industry practices.
16	Classification, Legislation on Pollution Prevention	16 hours	As the world's busiest seaport and one of the world's largest container ports, there is a continuous demand for maritime surveyors and technical executives and managers needing to understand how a classification society functions. This basic course introduces the important aspects of the maritime industry and its legislation processes. The purpose of the course is provide an Introduction to Maritime and Shipping legislation and Classification societies.
17	Maritime Operations	16 hours	<p>The principal role of the Ship or Vessel Operator is to plan the voyage of the ship, arrange slings and consumables as well as appointing and instructing agents and stevedores. This course is relevant to shipping executives in charge of vessel's operation.</p> <p>This course aims to equip non-maritime personnel with the theoretical knowledge and principles in the operation and management of shipping, logistics and offshore businesses. With this knowledge, they can apply themselves effectively to broaden the scope of their job function and keep themselves abreast with the rapidly changing industry practices</p>
18	Maritime Logistics Course	16 hours	<p>The role of maritime logistics and supply chain management deals with shipping companies who are handling shipping and transportation. Essentially, shipping companies around the world handle every phase of supply chain management and keep the shipments running smoothly.</p> <p>This course stresses only the important aspects of maritime logistics but also how it is linked with</p>

			logistics role in land, sea, air, logistics providers and pipeline. The purpose of the course is provide an Introduction to Maritime and Shipping. The course also provides an easy understand of Shipping Business, Seaports and Cargo Handling Logistics Management.
19	Dry Docking Management	60 hours	Dry docking of vessels is the most important part of ship management to ensure that vessel will remained under classed. It is also the biggest operational expenditure of ship management. In this module, students will learn how to prepare the dry docking specifications to ensure optimised utilisation of resources and time. Candidates will also acquire the knowledge of interpreting the quotations submitted by the shipyards during the yard selection. This include ensuring that the invoicing from the yard is correct.
20	Navigation Auditor Course	16 hours	<p>The Oil Companies International Marine Forum (OCIMF) is organised to represent its members in consult with the IMO (International Maritime Organisation) and other government bodies on matters relating to the shipment of crude oil & oil products, including marine pollution & safety.</p> <p>The OCIMF TMSA (Tanker management Self-Assessment) refers to Navigation Auditor Training as a KPI (Key Performance Indicator) for vessel operators. The OCIMF has also issued an information paper stressing on the need for Navigation Audits for identifying poor practices and to continuously improve navigational standards to ensure safe and effective voyages.</p> <p>The course aims to provide the means to establish an audit mechanism for Navigational performance in the Maritime Industry. This will include the validation of a company's navigation policies aligning to requirements, determining if the vessel's bridge procedures are in compliance and the Bridge Team are assessed for Risk Management and Bridge Resource Management.</p>
21	Maritime Cybersecurity (Basic) Training Programme	8 hours	<p>With the advancement of technologies, information technology (IT) and operational technology (OT) on board ships are increasingly being networked due to vessel digitization and often frequently connected to a private or public network. This brings greater risk of unauthorized access or malicious attacks to ships' systems, networks and even the safety of personnel on shipboard. As such, it is important for all maritime personnel to be aware of the importance of cyber security, understand the impact and know what the best practices are in cyber security on shipboard.</p> <p>The objective of the course is to create awareness and understanding of the cyber security threats and</p>

			challenges faced by the Maritime Industry. Mitigation of risks and countermeasures will also be discussed in the course
22	Robotics Process Automation	10 hours	Robotic Process Automation is the application of technology that allows employees in a company to configure software or a “robot” to capture and interpret existing applications for processing a transaction, manipulating data, triggering responses and communicating with other digital system. This course will show how businesses can automate some of the internal process to bring about an improvement in productivity and get employees to move up the work value chain.
23	Fundamentals of Cyber Security	8 hours	This is a short course optimised for synchronised learning to facilitate cybersecurity awareness training to participants from all industries. It is customisable to suit individual industry needs where applicable. For example, when training seafarers, the trainer could use the hacking incident on Merek’s system to explain the relevance of the training. The objective of the course is to create awareness and understanding of common cyber threats, both at home and at work. Typical mitigation methods will be discussed to help participants make better use of the available cyber security tools to protect themselves against cyber adversaries.
24	Essential Statistical Analysis	8 hours	<p>Statistics is an emergent discipline that has rapidly adapted to current Data culture and challenges. In today's era of big data where the computer and network are everywhere and everything can be measured, statistical skills are needed to make that data useful in order to make insightful decisions.</p> <p>Through this course, participants will be able to effectively conduct research, read and evaluate journal articles to further develop critical thinking and analytical skills and to act as an informed consumer of data.</p> <p>This course aims to equip participants with basic understanding of the main statistical concepts to prepare data for statistical analysis and interpret statistical analysis such as exploratory analysis to test for differences and associations. The software used for this training is Minitab/ Excel.</p>
25	Fundamental Data Analysis	16 hours	<p>Have you ever wondered how you could generate relevant information and gain insights from your data using Excel 2016? Become an Excel power user and increase your job efficiency by equipping yourself with emerging data analysis skills.</p> <p>This fundamental data analysis course is designed to equip you with relevant Excel skills for the purpose of analyzing data in business applications.</p>

			You will learn how to import data from various sources, merge data and organize them for visual presentation, and analyze the data to gain insights to support decision making.
26	Cyber Security for Non-IT Professionals	16 hours	The objective of the course is to create awareness and understanding about the security in the internet and Information Technology (IT) environment in general.
27	Introduction to Quantitative Data Analysis and Visualization	16 hours	<p>Data handling, analysis and visualization are critical skills that are necessary in managing the challenges in a variety of modern-day data-driven businesses. In today's era of big data where the computers and networks are everywhere and business processes may be translated to data, this means that data manipulation, analysis and visualization skills are much needed to make insightful decisions.</p> <p>Knowledge in data analysis and visualization provides one with the necessary skills that form the basis for deeper quantitative reasoning needed for data and predictive analytics work. This course aims to equip participants with the skills to clean data, perform simple analysis and create useful visualizations for presentation and recommendations to stakeholders. Participants will learn how to achieve this using Excel and Power BI software.</p>
28	Visual Analytics using power BI	14 hours	<p>The demand for visual analytics in business processes, for quick and informed decision-making, is ever increasing. Microsoft Power Business Intelligence (Power BI), is one of the solution platforms for a robust dashboard development. The high-end features from Microsoft Power BI and DAX functions, which are “similar” to those offered in Microsoft Excel, have made the process of building dashboards easier.</p> <p>Visual Analytics is the science of analytical reasoning supported by interactive visual interfaces. Today, data is produced at an incredible rate and the ability to collect and store the data is increasing at a faster rate than the ability to analyse it. Visual Analytics can be seen as an integral approach combining visualization, human factors, and data analysis. By end of the course, participants will be able to develop a dashboard that answers the problem question, use available functions and features to develop dashboard, learn to organize and plan the items in a dashboard and provide insights, KPI reporting and informed decision making.</p>