



## Course Description

**College/Institute:** Maritime Postgraduate Studies Institute  
**Program:** Masters of Science in Maritime Transport and Technology

1- Course Data		
<b>Course Code:</b> MPI 755	<b>Course Title:</b> Marine Accident Investigation	<b>Academic:</b> 3 CHs.
<b>Specialization:</b> Ship Operation & Marine Safety	<b>No. of Instructional Units:</b> 13	<b>Course Status:</b> Supplementary

<b>2- Course Aim</b>	At the end of this course students will be able to organize and conduct investigations into marine accidents and incidents in accordance with generally accepted practice.
<b>3- Intended Learning Outcome:</b>	
<b>a- Knowledge and Understanding, students will be able to:</b>	<ul style="list-style-type: none"> <li>- Understand international rule-making process and Identify various conventions, protocols, and codes on accident investigations;</li> <li>- Identify the common causes of marine accidents;</li> <li>- Explore principles of investigation;</li> <li>- Understand the relevance of incident and accident investigation and the legal role of the investigator;</li> <li>- Acquire a proper knowledge needed to a professional investigator to handle certain categories of marine casualties;</li> <li>- Understand various techniques in terms of collection of evidence, interviewing of witnesses and disclose information from a marine safety record;</li> </ul>
<b>b- Intellectual Skills, students will be able to:</b>	<ul style="list-style-type: none"> <li>- Understanding the main concept of applying consistent methodology and approach, to enable a broad ranging investigation;</li> <li>- Describe various techniques for interpreting and analyzing the gathered data/information;</li> <li>- Critically evaluate the varying types of accident analysis</li> <li>- Identify the benefits of and be able to draw a</li> </ul>



	<p>sequence of events diagram;</p> <ul style="list-style-type: none"> <li>- Explain root cause analysis and its application within the investigation process; and</li> <li>- Exercise and acquire required knowledge for investigating minor casualties and gain required experience before undertaking the investigation of major casualties.</li> </ul>
<b>c- Professional Skills, students will be able to:</b>	<ul style="list-style-type: none"> <li>- Analyze the human factors involved and how management can be used to address and reduce their impact</li> <li>- Recognize various types of casualty reports and casualty analysis;</li> <li>- Communicate the findings of a marine accident investigation through a detailed report with recommendations;</li> <li>- Learn formal technical reporting techniques for providing reports to the IMO and other international and /or governmental bodies.</li> </ul>
<b>d- General Skills, students will be able to:</b>	<ul style="list-style-type: none"> <li>- Classify different types of Marine Casualty or Marine Incident and know the investigation legal framework of the involved parties;</li> <li>- Demonstrate awareness and assess the means available to ensure personal safety at an investigation scene;</li> <li>- Gain a good working knowledge of the human factors involved in marine accidents; and</li> <li>- Describe how to set up a press conference and deal directly with the media.</li> </ul>
<b>4- Course Content</b>	<p><b>Week No.1</b> Introduction &amp; International obligations to conduct investigations</p> <p><b>Week No.2</b> IMO Code of the International Standards and Recommended Practices for a Safety Investigation into a Marine Casualty or Marine Incident</p> <p><b>Week No.3</b> Investigative purposes, procedures and practical preparation for investigation</p> <p><b>Week No.4</b> Gathering information and examination of witness</p> <p><b>Week No.5</b> Analysis of evidence &amp; Human</p>



	<p>aspects</p> <p><b>Week No.6</b> Inquiry reports</p> <p><b>Week No.7</b> Evaluation (1) &amp; Administration of Investigations</p> <p><b>Week No.8</b> Administration of Investigations</p> <p><b>Week No.9</b> The investigator's advisory role at formal hearings</p> <p><b>Week No.10</b> Findings and recommendations</p> <p><b>Week No.11</b> Role of human factor in marine accidents</p> <p><b>Week No.12</b> Evaluation (2): Field Trip</p> <p><b>Week No.13</b> Implications of investigation results</p> <p><b>Week No.14</b> Topical case study situation</p> <p><b>Week No.15</b> Accident investigation workshop (including videos) &amp; produce a detailed and well-structured report</p> <p><b>Week No.16</b> Final Assessment "reports submission and presentations"</p>
<b>5- Teaching and Learning Methods</b>	<ul style="list-style-type: none"> <li>- A mixture of lectures, tutorials, exercises are used to deliver general principles of PSC and other topics of the course,</li> <li>- A case study will be undertaken to provide the student skills and provenience of investigation.</li> <li>- Video film to illustrate through discussion and critical dialogue various tasks of marine investigator and identify &amp; analyze the proper methods of investigations of the marine accidents.</li> </ul>
<b>6- Teaching and Learning Methods for Students with Special Needs</b>	Extra office hours and additional follow-up, including remote sessions if needed.
<b>7- Student Assessment:</b>	
<b>a- Procedures used:</b>	<ul style="list-style-type: none"> <li>- Research Assignments</li> <li>- Oral Seminar presentations</li> <li>- Assessment workshop</li> </ul>
<b>b- Schedule:</b>	Assessment (1) 7th      Assessment (2) 12 <sup>th</sup> Assessment (3) 16 <sup>th</sup>
<b>c- Weighing of Assessment:</b>	7th Week evaluation (30%), 12th Week evaluation (20%), Final-term Report + assignment presentation (40%) Semester Work (10%) = Total 100%



<b>8- List of References:</b>	
<b>a- Course Notes</b>	Lecturer Handout & Lecturer PowerPoint presentation slides
<b>b- Required Books (Textbooks)</b>	<ul style="list-style-type: none"> <li>- IMO (2008), Casualty Investigation Code, Code of the international standards and recommended practices for a safety investigation into a marine casualty or marine incident 2008 Edition, Corrigendum, ISBN: 9789280114980, London;</li> <li>- MAIIF (2014), Marine Accident Investigators' International Forum Investigation (MAIF) Manual (2014), UK</li> </ul>
<b>c- Recommended Books</b>	<ul style="list-style-type: none"> <li>- ABS (2014), Guidance Notes on the investigation of marine incidents, consolidated edition, American Bureau of Shipping, New York</li> <li>- Oakley J., (2012), Accident Investigation Techniques, 2nd Edition, American Society of Safety Engineers, Texas City</li> <li>- MAIB (2015), Marine Accident Investigation Board (MAIB) annual report 2014, Southampton, UK</li> </ul>
<b>d- Periodicals, Web Sites, ..., etc.</b>	<ul style="list-style-type: none"> <li>- <a href="http://www.maiif.org/">http://www.maiif.org/</a></li> <li>- <a href="http://www.imo.org/en/OurWork/MSAS/Casualties/Pages/Lessons-learned.aspx">http://www.imo.org/en/OurWork/MSAS/Casualties/Pages/Lessons-learned.aspx</a></li> <li>- <a href="https://www.gov.uk/government/organisations/marine-accident-investigation-branch">https://www.gov.uk/government/organisations/marine-accident-investigation-branch</a></li> </ul>

**Prepared by**  
**Name & Signature:**  
**Date: 20/3/2015**

**Institute Dean**  
**Name & Signature:**  
**Date: 20/3/2015**