



Course Description

Institute: Maritime Postgraduate Studies Institute

Program: Doctorate of Maritime Transport Technology

1- Course Data		
Course Code: MPI 806	Course Title: Maritime Technology Innovation	Academic : 3 Hrs.
Specialization: Common	No. of Instructional Units: 13	

2- Course Aim	The aim of this course is to explore the latest developments in maritime technology to improve maritime safety, environmental protection and energy efficiency in compliance with the International Conventions, also to illustrate high technology used in ship construction and design
3- Intended Learning Outcome:	
a- Knowledge and Understanding, students will be able to:	<ul style="list-style-type: none"> - put assumptions to Reduce life-cycle environmental impact and related costs - know the current trends in shipping industry development and the needs for more developments. - suggests new techniques and innovative methods to protect the marine environment. - propose new ideas to reduce gas emission from ships.
b- Intellectual Skills, students will be able to:	Graduates are scientifically competent in solving problems logically, analytically and creatively based on sound facts and ideas.
c- Professional Skills, students will be able to:	- Dealing with maritime discoveries and ideas able to help candidates be at the cutting edge.
d- General Skills, students will be able to:	- The latest regulatory frame work organizing the maritime industry.
4- Course Content	<p>Week No.1 Introduction about new trend in maritime industry.</p> <p>Week No.2 Leading edge lab equipment, including prototyping equipment used in</p>



	<p>design and testing marine equipment</p> <p>Week No.3 Estimated future development of maritime industry</p> <p>Week No.4 Application of high safety standards on ships</p> <p>Week No.5 Control of exhaust gas emission from ships</p> <p>Week No.6 High techniques of ship design and construction</p> <p>Week No.7 7th Week Evaluation</p> <p>Week No.8 Advanced equipment for controlling ship wastes</p> <p>Week No.9 Energy efficiency on board</p> <p>Week No.10 Renewable energy in marine industry</p> <p>Week No.11 Impact of new technologies on reduction of major accident risks</p> <p>Week No.12 12th Week Evaluation</p> <p>Week No.13 Energy Efficiency Design Index EEDI</p> <p>Week No.14 Ship Energy Efficiency Management Plan</p> <p>Week No.15 Final Evaluation</p>
<p>5- Teaching and Learning Methods</p>	<p>A mixture of lectures, tutorials, exercises, and case studies are used to deliver the various topics in this subject, some of which are covered in a problem-based format, thereby enhancing the learning objectives. Others are covered through directed study in order to enhance the students' ability of "learning to learn."</p>
<p>6- Teaching and Learning Methods for Students with Special Needs</p>	<p>A mixture of lectures, tutorials, exercises, and case studies are used to deliver the various topics in this subject, some of which are covered in a problem-based format, thereby enhancing the learning objectives by using Office hours and Additional Follow up.</p>
<p>7- Student Assessment:</p>	
<p>a- Procedures used:</p>	<ol style="list-style-type: none"> 1. Participation 2. Assignments 3. Presentations 4. Case Study 5. Quiz 6. Written Exams 7. Workshop



b- Schedule:	Assessment (1) Mid Assessment (2) 12 th Assessment (3) 15 th .
c- Weighing of Assessment:	7 th Week Examination , 12 th Week Examination , Final-term Report Writing , Oral seminar exam , Practical Examination , Semester Work , Total 100%
8- List of References:	
a- Course Notes	<ul style="list-style-type: none"> • Power point slides of lectures • Documents such as reports, case studies
b- Required Books (Textbooks)	DNV, (2015), "Maritime Technology and Innovation", DNV-GL, Last viewed on the following web address: https://www.dnvgl.com/maritime/research-and- development/innovation-areas.html
c- Recommended Books	IMO, (2015), "Maritime Innovations and Technology", IMO Publications, Last viewed on the following web address: https://www.imo.org/
d- Periodicals, Web Sites, ..., etc.	www.imo.org

Vice Dean for Educational Affairs
Affairs Name & Signature:
Date:20/1/2015

College/Institute Dean
Name & Signature:
Date:20/1/2015