



Course Description

College/Institute: Maritime Postgraduate Studies Institute

Program: M.Sc. in Hydrographic Surveying

1- Course Data		
Course Code: MPI 714	Depth Surveying	Academic Year:2015-2016
Specialization:	Hydrographic Surveying	

2- Course Aim	This course aims at enabling students to Master fundamentals and methods of research in order to produce their thesis in accordance to the academic final degree research requirements. However, this course aims at enabling students to Master fundamentals and methods of research in order to produce their thesis in accordance to the academic final degree research requirements.
3- Intended Learning Outcome:	
a- Knowledge and Understanding, students will be able to:	<ol style="list-style-type: none"> 1. To be familiarized with the technologies, equipment used in determining the depth of water at the surveying area. 2. Principles of depth sounding, energy, freq. 3. Pulse shape and duration, beam width. 4. Time measurement, transmission unit.
b- Intellectual Skills, students will be able to:	<ol style="list-style-type: none"> 5. Identify and critically analyze issues involved in depth survey uses and other branches and uses of depth survey techniques.
c- Professional Skills, students will be able to:	<ol style="list-style-type: none"> 6. Manage to striction and piezoelectric transducers 7. Echo sounders corrections, index, separation and squat 8. Sounding calibration sound velocity, bar check 9. False echoes, by fish, water layers, fresh water springs 10. Side lobes echoes, instrument errors. 11. Shallow water effects, shore seabed effect 12. Principles of the side scanning.
d- General Skills, students will be able to:	<ol style="list-style-type: none"> 13. Measurement of object height and length. 14. Single beam, double beam transmission. 15. Depth reduction and plotting.
4- Course Content	<p>Week (1) Bases principles of depth sounding, energy, freq.</p> <p>Week (2) Pulse shape and duration, beam width.</p> <p>Week (3) Time measurement, transmission unit.</p>



	<p>Week (4) Magneto striction and piezoelectric transducers</p> <p>Week (5) Echo sounders corrections, index, separation and squat</p> <p>Week (6) Sounding calibration sound velocity, bar check</p> <p>Week (7) 7th week evaluation</p> <p>Week (8) False echoes, by fish, water layers, fresh water springs</p> <p>Week (9) Side lobes echoes, instrument errors.</p> <p>Week (10) Shallow water effects, shore seabed effect.</p> <p>Week (11) Principles of the side scanning.</p> <p>Week (12) 12th week exam.</p> <p>Week (13) Measurement of object height and length.</p> <p>Week (14) Single beam, double beam transmission.</p> <p>Week (15) Depth reduction and plotting.</p> <p>Week (16) Final exam.</p>
5- Teaching and Learning Methods	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.
6- Teaching and Learning Methods for Students with Special Needs	
7- Student Assessment:	<ol style="list-style-type: none"> 1.Participation 2.Assignments 3.Presentations 4.Case Study 5.Quiz 6.Written Exams 7.Workshop
a- Procedures used:	
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	
b- Required Books (Textbooks)	

Doc. No.: PGQMS 2

Revision no.: 1.0

**Development and Review of Post
Graduate Courses Procedure**



c- Recommended Books	
d- Periodicals, Web Sites, ..., etc.	

**Vice Dean for Educational Affairs
Affairs Name & Signature:
Date:**

**College/Institute Dean
Name & Signature:
Date:**