

## UNIVERSITY OF PLYMOUTH MODULE RECORD

**SECTION A: DEFINITIVE MODULE RECORD.** *Proposed changes must be submitted via Faculty/AP Quality Procedures for approval and issue of new module code.*

**MODULE CODE:** EHYD501A

**MODULE TITLE:** Advanced Nautical Science for Hydrography

**CREDITS:** 20

**FHEQ LEVEL:** 7

**HECOS CODE(S):** F720

**PRE-REQUISITES:** None

**CO-REQUISITES:** None

**COMPENSATABLE:** Yes

**SHORT MODULE DESCRIPTOR:**

This module will allow the student to review the historical and professional framework for hydrographic surveying and develop an in depth understanding of the effects on survey of ship motion and behaviour. A comprehensive treatment of Earth observation and remote sensing is augmented by support for study and research skills.

ELEMENTS OF ASSESSMENT					
<b>E1</b> (Examination)	N/A	<b>C1</b> (Coursework)	<b>100%</b>	<b>P1</b> (Practical)	N/A
<b>E2</b> (Clinical Examination)	N/A	<b>A1</b> (Generic assessment)	N/A		
<b>T1</b> (Test)	N/A	<b>O1</b> (online open book assessment)	N/A		

**SUBJECT ASSESSMENT PANEL to which module should be linked:** MLA

**Professional body minimum pass mark requirement:** N/A

**MODULE AIMS:**

This module aims to allow the student to develop a comprehensive understanding of remote sensing and ship behaviour, and how these relate to the professional aspects of hydrographic surveying.

**ASSESSED LEARNING OUTCOMES:** (additional guidance below; please refer to the Programme Specification for relevant Programme Intended Learning Outcomes).

At the end of the module the learner will be expected to be able to:

Assessed <b>Module Learning Outcomes (ALOs)</b>	<b>Programme Intended Learning Outcomes (PILOs) contributed to</b>
<ol style="list-style-type: none"> <li>1. Display a systematic knowledge of the aspects of charting and navigation relevant to the hydrographic surveyor</li> <li>2. Demonstrate an in-depth knowledge of the elements of Earth observation and satellite remote sensing relevant to the advanced survey practice</li> <li>3. Evaluate and predict the behaviour of floating platforms at sea, and predict the effects on survey activities</li> <li>4. Improve and develop the study and research skills necessary to undertake a programme of postgraduate study successfully</li> </ol>	<p>LO1 &amp; LO2 Display a systematic knowledge of the aspects of charting &amp; of the elements of Earth observation and satellite remote sensing</p> <p>LO3 &amp; LO4 Evaluate and predict the behaviour of floating platforms at sea and predict the effects on survey activities.</p>

<b>DATE OF APPROVAL:</b> 01/2013	<b>FACULTY/OFFICE:</b> Academic Partnerships
<b>DATE OF IMPLEMENTATION:</b> 03/2013	<b>SCHOOL/PARTNER:</b> MLA
<b>DATE(S) OF APPROVED CHANGE:</b> 03/2022	<b>SEMESTER:</b> AY
<b>MODE OF DELIVERY:</b> distance learning	
<p><b>Notes</b> (for office use only):  For delivering institution's HE Operations or Academic Partnerships use if required</p> <p>EHYD501A replaces code EHYD501 to reflect only that this module should be compensatable (R Pomeroy, 3/3/22)</p>	

**Additional Guidance for Learning Outcomes:**

To ensure that the module is pitched at the right level check your intended learning outcomes against the following nationally agreed standards

- Office for Students, [Sector-recognised Standards](#)
- Office for Students, [Quality and Standards Conditions of Registration](#)
- [Subject benchmark statements](#)
- Professional, regulatory and statutory (PSRB) accreditation requirements (where necessary e.g. health and social care, medicine, engineering, psychology, architecture, teaching, law)

**SECTION B: DETAILS OF TEACHING, LEARNING AND ASSESSMENT**

Items in this section must be considered annually and amended as appropriate, in conjunction with the Module Review Process. Some parts of this page may be used in the KIS return and published on the extranet as a guide for prospective students. Further details for current students should be provided in module guidance notes.

**ACADEMIC YEAR: 2022-23****NATIONAL COST CENTRE: 111****MODULE LEADER: Dr Carlos Martins****OTHER MODULE STAFF: Dr Jaimie Cross****Summary of Module Content:**

A review of the background nautical science theory is followed by a study of advanced Earth observation and satellite remote sensing. Ship behaviour and the effect of vessel stability on a survey platform is covered in detail, together with work to refresh and improve research and study skills.

<b>SUMMARY OF TEACHING AND LEARNING [Use HESA KIS definitions]</b>		
<b>Scheduled Activities</b>	<b>Hours</b>	<b>Comments/Additional Information (briefly explain activities, including formative assessment opportunities)</b>
Lectures (on-line)	40	Full suite of Nautical Science and Hydrography lectures
Practical work (on-line)	20	Including ship stability experiments and remote sensing data processing and analysis
Directed and self-study	50	Research
Personal development planning	10	
Professional portfolio	80	Building maths & written work portfolio
<b>Total</b>	<b>200</b>	<b>(NB: 1 credit = 10 hours of learning; 10 credits = 100 hours, etc.)</b>

**SUMMATIVE ASSESSMENT**

<b>Element Category</b>	<b>Component Name</b>	<b>Component Weighting</b>
Written exam	N/A	N/A
Test	N/A	N/A
Coursework	Professional Portfolio	35% 65%
Practical	N/A	N/A
Clinical Examination	N/A	N/A
Generic Assessment	N/A	N/A
Online open book assessment	N/A	N/A

**REFERRAL ASSESSMENT**

Element Category	Component Name	Component Weighting
Written exam	N/A	N/A
Coursework (in lieu of the original assessment)	Professional Portfolio	35% 65%
Coursework	N/A	N/A
Practical	N/A	N/A
Clinical Examination	N/A	N/A
Generic Assessment	N/A	N/A
Test	N/A	N/A
Online Open Book Assessment	N/A	N/A

<b>To be completed when presented for Minor Change approval and/or annually updated</b>	
<b>Updated by:</b> MLA College <b>Date:</b> 3 <sup>rd</sup> March 2022	<b>Approved by:</b> Dr Ross Pomeroy <b>Date:</b> 3 <sup>rd</sup> March 2022

<p><b>Recommended Texts and Sources:</b></p> <ul style="list-style-type: none"> <li>• International Hydrographic Organization’s online “Manual on Hydrography”</li> <li>• International Hydrographic Organization’s online “Standards for Hydrographic Surveys”</li> <li>• European Space Agency introductory material on the eduspace portal [includes the ability to have the text in different languages</li> <li>• Robinson, I.S. 2004. Measuring the oceans from space: the principles and methods of satellite oceanography. Springer in association with Praxis, New York.</li> <li>• Gary C. Guenther, G.C., Cunningham, A.G., LaRocque, P.E. and Reid, D.J. 2001. Meeting the accuracy challenge in airborne Lidar bathymetry. eProceedings Vol. 1, No. 1.</li> </ul>
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