

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:** EHYD103**MODULE TITLE:** Fundamentals of Hydrography**CREDITS:** 30**FHEQ LEVEL:** 4**HECOS CODE(S) [max 3]:** F720**PRE-REQUISITES:****CO-REQUISITES:****COMPENSATABLE:** N**SHORT MODULE DESCRIPTOR:**

This module provides an introduction to aspects of Earth observation and measurement critical to those required to engage in practical hydrography. Basic geodesy, together with Earth observation using satellites and acoustics are studied, together with an introduction to the principles of horizontal and vertical positioning.

ELEMENTS OF ASSESSMENT					
E1 (Examination)	N/A	C1 (Coursework)	100%	P1 (Practical)	N/A
E2 (Clinical Examination)	N/A	A1 (Generic assessment)	N/A		
T1 (Test)	N/A	O1 (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:**

To introduce the student to the basic principles and techniques relating to Earth observation, measurement and sensors.

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 Module Learning Outcomes (ALOs)	Programme Intended Learning Outcomes (PILOs) contributed to
<ol style="list-style-type: none"> 1. Apply the basic theories in geodesy to hydrography operations 2. Demonstrate an understanding of satellite positioning and remote sensing, with its limitations 3. Apply basic acoustic theory to the operation of survey equipment 4. Use horizontal and vertical positioning theories and techniques to demonstrate an understanding of how a vessel or object is located within a positioning framework 	<p>LOs 1&2. The main principles of satellite positioning and remote sensing, together with some key limitations are identified.</p> <p>LOs 3&4. A knowledge of acoustic basics and sensors is demonstrated, and horizontal and vertical positioning techniques are explained.</p>

DATE OF APPROVAL: 01/2013	FACULTY/OFFICE: Academic Partnerships
DATE OF IMPLEMENTATION: 06/2013	SCHOOL/PARTNER: MLA
DATE(S) OF APPROVED CHANGE:	SEMESTER: AY
MODE OF DELIVERY: distance learning	
Notes: For delivering institution's HE Operations or Academic Partnerships use if required	

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

- Framework for Higher Education Qualifications
<http://www.qaa.ac.uk/docs/qaa/quality-code/qualifications-frameworks.pdf>
- Subject benchmark statements <https://www.qaa.ac.uk/quality-code/subject-benchmark-statements>
- Professional, regulatory and statutory (PSRB) accreditation requirements (where necessary e.g. health and social care, medicine, engineering, psychology, architecture, teaching, law)
- QAA Quality Code <https://www.qaa.ac.uk/quality-code>

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 Jaimie Cross****OTHER MODULE STAFF: Dr Carlos Martins****Summary of Module Content**

An introduction to geodesy, together with satellite remote sensing, principles and sensors. Introduction to underwater acoustics including wave propagation, spreading loss and transducers. Horizontal and vertical positioning theory and techniques.

SUMMARY OF TEACHING AND LEARNING [Use HESA KIS definitions]		
Scheduled Activities	Hours	Comments/Additional Information (briefly explain activities, including formative assessment opportunities)
Lectures (on-line)	130	Indicative figures for distance learning
Tutorials and formative assessment (on-line)	15	Indicative figures for distance learning
Practical work (on-line)	10	Including remote sensing data processing and presentation, positioning applying theory
Directed Self-Study, personal development planning and completion of summative assessment	155	Reading and associated study leading to assessment.
Total	300	(NB: 1 credit = 10 hours of learning; 10 credits = 100 hours, etc.)

SUMMATIVE ASSESSMENT

Element Category	Component Name	Component Weighting
Written exam	N/A	N/A
Test	N/A	N/A
Coursework	Geodesy & Satellite Positioning	35%
	Acoustics and Positioning	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)	Geodesy & Satellite Positioning	35%
	Acoustics and Positioning	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

To be completed when presented for Minor Change approval and/or annually updated**Updated by:** Paul Newman**Date:** 13/05/2015**Approved by:** Ross Pomeroy**Date:** 13/05/2015