

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: EHYD504A

MODULE TITLE: Earth Science and Positioning

CREDITS: 20

FHEQ LEVEL: 7

HECOS CODE(S): F720

PRE-REQUISITES: None

CO-REQUISITES: None

COMPENSATABLE: Yes

SHORT MODULE DESCRIPTOR:

This module will provide the advanced theory in geodesy and positioning necessary to undertake and manage practical hydrographic survey work. Studies in geology, geophysics and sedimentation provide the underpinning knowledge necessary for future work in survey planning, conduct and management both inshore and offshore. Management of errors.

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:

This module aims to provide the student with the advanced principles and techniques in Earth science and positioning necessary to collect and process hydrographic data effectively.

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
1. Relevant geodetic theory in hydrographic survey contexts	LO1 & LO2 Geodetic theory geology and geophysics for advanced hydrographic survey operations
2. Demonstrate a comprehensive knowledge of the aspects of geology and geophysics of relevance to advanced hydrographic survey operations	
3. Evaluate, select, and compare equipment and techniques for horizontal and vertical positioning	LO3 & LO4 Geodetic theory of horizontal and vertical positioning. Evaluation and selection of equipment and techniques for horizontal and vertical positioning. Manage errors & error budgets.
4. Identify, evaluate, and manage errors	

DATE OF APPROVAL: 01/2013	FACULTY/OFFICE: Academic Partnerships
DATE OF IMPLEMENTATION: 11/2014	SCHOOL/PARTNER: MLA
DATE(S) OF APPROVED CHANGE: 03/2022	SEMESTER: AY
MODE OF DELIVERY: distance learning	
<p>Notes (for office use only): For delivering institution's HE Operations or Academic Partnerships use if required</p> <p>EHYD504A replaces code EHYD504 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

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

Advanced geodesy, coordinate systems, geophysics, and sediment transport. Horizontal and vertical positioning, applying appropriate methods to solve complex planning and practical problems. Errors, error theory and error management

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)	30	On and offline lectures
Practical work (online)	10	Including triangulation and trilateration exercises
Tutorials and formative assessment	50	Tutor-led sessions and topical exercises
Directed and self-study	40	Research
Personal development planning	10	
Professional portfolio	60	Building written and mathematical portfolio of work
Total	200	(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	Professional Portfolio	50% 50%
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	50% 50%
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: MLA College Date: 3 rd March 2022	Approved by: Dr Ross Pomeroy Date: 3 rd March 2022

Recommended Texts and Sources:
<ul style="list-style-type: none"> • Pinet, P. R. (2009) <i>Invitation to Oceanography</i>, 5th Edition. Jones and Bartlett Publishers, Inc, 576 pp. • Coffeen JA, 1986, <i>Seismic Exploration Fundamentals</i>, Penwell, 2nd Edition • Lekkerkerk H-J, van der Velden R, Haycock T, Jansen P, de Vries R, van Waalwijk P, Beemster C. (2006) <i>Handbook of Offshore Surveying</i>. Skilltrade, Clarkson Research Services, London • International Hydrographic Organization’s online “<i>Manual on Hydrography</i>” (publication C-13) • International Hydrographic Organization’s online “<i>Standards for Hydrographic Surveys</i>” (publication S-44) <p>Journals:</p> <ul style="list-style-type: none"> • Hydrographic Journal • Hydro International • Sea Technology <p>Marine Geodesy</p>