

Study Card

Master Geomatik
HCU Hamburg

Module-No.	Semester	Teaching staff	Module-coordinator (designated each sem.)
Geo_M304	3	Dr. Peter Damm, NN	Prof. Dr.-Ing. V. Böder

Module name	Subject areas	Duration/sem.	Frequency of offering	Type (C/CE/E)	Emphasis in overall grade / %
Fundamental Oceanography	Hydrography	1 Semester	each WiSe	C	4,16 %

CP (according to ECTS)	Workload / h.	Self-study / h.	Contact time / h.	Contact hours / week (SWS)	Type of examination
5CP	146	90	56.	4 + 0	oral (graded)

Previous knowledge / Conditions for participation (in form and content)

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Educational aims of the module (Learning objectives/results, skills)

The students are introduced to the fundamentals of physical oceanography and tides.

Course contents

Physical Oceanography :

Fundamental theories of oceanography, mass distribution and currents, covering the most important features of physical oceanography.

Oceanographic measurement systems, functionality, in situ application (on a ship, moorings, drifters).

Utilization of measurement data in relation to theoretical oceanography.

Practice: Data acquisition on site in a near shore area with DGPS positioning. Non-synoptic data acquisition. Measurement of the following parameters along the entire water column: current (horizontal components in selected depth levels), temperature, salinity, pressure (for density determination), as well as attenuation (for assessing the content of suspended matter).

Tides :

Concepts: tide generating forces, static and dynamic tidal theories, harmonic formulas for prediction and analysis, major harmonic constituents, various types of tide, characteristic levels, amphidromic points and cotidal lines.

Tidal streams: linear and rotary tidal streams, stream analysis and prediction, relationship between streams and tides.

Tidal measurements, tide tables, cotidal charts, non-tidal water level variations.

Teaching and learning methods

Taught seminars

Condition for awarding the ECTS-credits

Combined Oral examination

Additional Information

Latest update: 06/2011