### Study Card

**Module-No.** Geo_M101  
**Semester** 1  
**Teaching staff** Prof. Dr.-Ing. Delf Egge, Dipl.-Ing. Kay Zobel  
**Module-coordinator** (designated each sem.) Prof. Dr.-Ing. Volker Böder

<table>
<thead>
<tr>
<th>Module name</th>
<th>Subject areas</th>
<th>Duration/sem</th>
<th>Frequency of offering</th>
<th>Type (C/CE/E)</th>
<th>Emphasis in overall grade / %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Processing</td>
<td>Hydrography</td>
<td>1 Semester</td>
<td>each WiSe</td>
<td>C</td>
<td>4,16 %</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CP (according to ECTS)</th>
<th>Workload / h.</th>
<th>Self-study / h.</th>
<th>Contact time / h.</th>
<th>Contact hours / week (SWS)</th>
<th>Type of examination</th>
</tr>
</thead>
<tbody>
<tr>
<td>5CP</td>
<td>150</td>
<td>94</td>
<td>56</td>
<td>4 + 0</td>
<td>oral (graded)</td>
</tr>
</tbody>
</table>

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

- 

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

The students acquire deeper data processing knowledge in the area of hard- and software. They are enabled to solve interfacing problems between data processing instruments and geodetic instruments. The foundations of Caris HIPS / SIPS are treated.

**Course contents**

**Interface Technology:**
- Codes (BCD, ASCII, EBCDIC).
- Interfacing techniques (BCD, Centronics, IEC-Bus, RS 232 C). Mechanical, functional, electrical properties, hardware handshake, software handshake, interface testing instruments. Connecting different sensors to a personal computer.

**Basics on Caris:**
- Vessel Configuration for Total Propagated Error, Project Setup and Data Conversion, Sensor Editing, Building Field Sheets, Sound Velocity Correction, Loading Tide, Merge Process, Creating Sun Illuminated Gridded Images, Swath Editing, Surface Cleaning, Subset Editing, BASE Surfaces, CUBE, Creation of Contours and Soundings, Data Export.

**Teaching and learning methods**

**Taught seminars**

**Condition for awarding the ECTS-credits**

Oral examination in Interface Technology

**Additional Information**

| Latest update: 06/2011 |