

## Hydrographic Course in Finland


(31 January 2005)

In Autumn 2004 the Institute of Cartography and Geoinformatics of the Technical University of Helsinki organised the first university level (4<sup>th</sup> year) hydrographic course in Finland. The course composed of 6 lectures given by the experts of the Hydrographic Department of the Finnish Maritime Administration. The lectures were given in English. The content of the Course is in shown in Annex 1.

The Course got very positive acceptance of the students. Some 20 students attended the lections and practical training. Also some staff of the Hydrographic Department attended the lectures.

The first examination was held in December and 9 students passed it.

**Maa-123.550 Hydrography (1,5 cr)**  
*a.k.a. Maa-123.550 Nautical Chart Production (1,5 cr)*



The course provides an overview of the nautical charts production from the initial hydrographic surveys to the final printed or electronic charts. Modern hydrographic surveying technology combined with internationally acknowledged applications of top geographical information technology in data management and chart production systems give an insight into the hydrographic charting process. International features, such as standards for hydrographic surveys and nautical charts, are useful in the international world of navigation.

The course consists of six lectures, an exercise and an excursion.

For more: <http://www.hut.fi/Units/Cartography/courses/maa-123550/>

### Actions required by the NHC/49 Meeting:

For information. No actions requested.

**Annex 1:****The content of the Hydrographic Course at HUT  
in Autumn 2004****1. Hydrography in general** (*Maarit Mikkelsen*)

- The organization of the Finnish Maritime Administration
- Hydrography in Finland
- Exercise

**2. Hydrographic surveying** (*Seppo Mäkinen*)

- Collection of geographical information
- Survey methods, multibeam, echo sweeping...
- Data processing
- Coordinate systems, GPS etc., equipment

**3. Management of maritime geographic information***(Rainer Mustaniemi)*

- Data registers and data management systems
- Data management process

**4. Electronic navigational charts** (*Jorma Timonen*)

- ENC (Electronic Navigational Chart)
- ECDIS (Electronic Chart Display System)
- Digital charts
- International standards around ENC

**5. From data to product (printed nautical charts)** (*Matti Olkinuora*)

- Production system for printed nautical charts
- Symbolology, cartography
- Products of Finnish Maritime Administration

**6. International co-operation and standards in Hydrography***(Juha Korhonen)*

- International co-operation
- Co-operation with neighbouring countries
- Standardization
- Data exchange
- The charts of other countries
- Education

**7. EXCURSIONS**

---