

IHB File No. TA-6

**CIRCULAR LETTER 22/1999**  
**7 May 1999**

**NEW COURSE ON "HYDROGRAPHIC DATA MANAGEMENT"  
AT THE INTERNATIONAL MARITIME ACADEMY (IMA),  
TRIESTE, ITALY**

Dear Sir,

The International Maritime Academy (IMA) in Trieste has informed the IHB, on behalf of the Italian Authorities, that a new course on "Hydrographic Data Management" has been scheduled in 1999.

The course will start on Monday 30 August 1999 and will end on Friday 3 December 1999.

This first course is intended for twelve students from beneficiary countries of the MEDA Project for Southern and South East Mediterranean Sea. Government authorities responsible for Hydrography in the twelve MEDA countries are requested to forward their candidates' applications to the International Maritime Academy (IMA), via Eduardo Weiss 15, 34127 Trieste, Italy (Telephone: +39 040 350829, Fax: +39 040 350322 and E-mail imoima@imoimaisdn.inet.it) **through the Italian Embassy** in their country, with a copy to the International Hydrographic Bureau. **Nominations must reach the IMA by 26 June 1999 at the latest.**

In addition to the 12 places mentioned above, 2 other students will be selected from amongst the IHO Member States and those countries which are known to be actively considering establishing or enhancing their own hydrographic services. The expenses for these two students will be funded by the Friuli Venezia Giulia Region.

The support provided by IMA will cover travel expenses, local transport to Trieste, accommodation and food. Money for other personal expenses (pocket money) must be provided by each student's national authority. (See Annex 2, page 3).

Information on the course programme and the logistics are provided in Annex 2. A copy of the Nomination Form is also attached (Annex 3).

Due to the limited places on this course, unsuccessful candidates will be considered for the second course which is planned for the year 2000.

On behalf of the Directing Committee,  
Yours sincerely,

Rear Admiral Giuseppe ANGRISANO  
President

Encls: **(in English only)**

- Annex 1 - Distribution list
- Annex 2 - Course Details & Logistics
- Annex 3 - Nomination Form for Participation & Acceptance Form

**DISTRIBUTION LIST**

- All IHO Member States
- All MEDA Project 7 countries :
  - ALGERIA (IHO Member State)
  - CYPRUS (IHO Member State)
  - EGYPT (IHO Member State)
  - ISRAEL (Non-IHO Member)
  - JORDAN (Non-IHO Member)
  - LEBANON (Non-IHO Member)
  - MALTA (Non-IHO Member)
  - MOROCCO (Pending IHO Member)
  - PALESTINIAN AUTHORITY (Non-IHO Member)
  - SYRIA (IHO Member State)
  - TUNISIA (IHO Member State)
  - TURKEY (IHO Member State)
- MEDA Project 7 Steering Committee Members:
  - France, Greece, Italy, Spain, EC DGIB, EC DGVII.
- International Maritime Academy, Trieste, Italy.
- Italian Ministry of Foreign Affairs, Directorate General for Cooperation to Development, Rome, Italy.
- Friuli-Venezia Giulia Region, via San Francesco 37, 34100 Trieste, Italy.
- Province of Trieste, Piazza Vittorio Veneto 4, 34132 Trieste, Italy.
- Trieste Port Authority, Punto Franco Vecchio, 34135 Trieste, Italy.
- University of Trieste, Piazzale Europa 1 (Rettorato), 34100 Trieste, Italy.
- Trieste Chamber of Commerce, Piazza della Borsa 14, 34100 Trieste, Italy.
- Comune di Trieste, Piazza dell'Unità d'Italia 4, 34100 Trieste, Italy.

## DETAILS OF THE COURSE

### **Background**

The Hydrographic Data Management course is part of the hydrographic training programme established under the MEDA project. The Meda Project aims at promoting safety of navigation and prevention of marine pollution, as well as the development of maritime transportation and port efficiency.

The course is designed to address the needs of Hydrographic Services and others involved in marine data management who require their personnel to obtain:

- Knowledge in designing and managing integrated data bases of hydrographic and other marine data;
- Knowledge in Geographic Information Systems (GIS), their constitution and use in order to rationalize and speed up the production of specific information which can be derived from database and GIS such as:
  - Nautical information (Nautical Charts, Electronic Nautical Charts, NtMs, List of Lights, Sailing Direction etc)
  - Bathymetric information (Charts, Digital model etc)
  - Coastal management information (thematic charts, bathymetric and tidal models etc)
  - Geophysics and Oceanographic information

Although the course provides a satisfactory theoretical part, it will also be eminently practical, allowing the students to operate on computers using operative systems, Geographic Information systems and Hydrographic Information Systems, present at IMA.

### **Entry requirements**

The course is open to students from Port Authorities, Hydrographic Services and Maritime Authorities and organizations responsible for hydrography in their countries.

The students must hold, at least, a Higher School Certificate and have a good knowledge of the English language, both spoken and written.

Considering the specialization of the course, it would be advisable that participants have the following profile :

- Hydrographers having attended a Cat. A or Cat. B hydrographic course during the last 3-4 years.
- Surveyors and chart makers with good experience and knowledge in geodesy, positioning methods, Single and Multibeam sounding data acquisition, basic knowledge of computer assisted cartography and automated survey systems. Also good working experience with computers.
- H.O's staff members engaged in product generation.

### **Total duration**

The duration of the course is 3 months (456 hours).

### **Language**

The course will be conducted in English.

## COURSE OUTLINE

The course lasts three months (13 weeks). Lessons are generally 7 hours per day, from Monday to Friday, with a total number of 456 hours. The course has been subdivided into the following 7 modules, preceded by a General Introduction to the course.

<i>Modules</i>	<i>Hours</i>
<b>GENERAL INTRODUCTION .....</b>	<b>5</b>
<b>1. Basics .....</b>	<b>90</b>
1.1 Mathematics and Statistics .....	10
1.2 Physics and Applied Physics .....	20
1.3 Computers .....	49
1.4 Office Automation Integrated Tools .....	11
<b>2. Information Technology .....</b>	<b>50</b>
2.1 Theoretical Approach .....	5
2.2 Geography and Information Technology ..	30
2.3 Special Issues on Information Technology.....	15
<b>3. Geographical Information Systems .....</b>	<b>90</b>
3.1 GIS Principles and Criteria .....	6
3.2 GIS Theoretical Approach .....	59
3.3 GIS Special Issues .....	25
<b>4. Hydrographic GIS.....</b>	<b>105</b>
4.1 HydroGIS Theoretical Approach .....	10
4.2 Data Acquisition.....	10
4.3 Data Management Work flow .....	18
4.4 Data Quality Management.....	21
4.5 Use of HydroGIS .....	21
4.6 HydroGIS Special Issues .....	25
<b>5. Hydro Data Management Workflow .....</b>	<b>100</b>
5.1 Hydro D.M. Theoretical Description and Practice .....	90
5.2 Management of Multibeam Echosounder Data .....	10
<b>6. Digital Data Exchange Standards .....</b>	<b>11</b>
6.1 Standards .....	2
6.2 International Standards .....	9
Recommendations, Resolutions .....	8
<b>7. Data Management Plan .....</b>	<b>5</b>

## LOGISTICS

**Accommodation:** Twin-bedded rooms (two students per room) for the entire period of the course.

**Food arrangements:** breakfast, lunch and dinner will be provided by IMA.

Health and accident insurance will be provided.

Pocket money and other personal expenses will be at the charge of the organization to which the student belongs.

Assistance in obtaining a visa may be provided by IMA, but should be the responsibility of the national organization.

Prepaid air tickets will be made available at a selected air company (will be communicated by IMA) in the country.

**Note: The air ticket will have to be refunded in case of non-completion of the course**

**COURSE ON HYDROGRAPHIC DATA MANAGEMENT**

From 30 August to 3 December 1999

**NOMINATION FORM FOR PARTICIPATION**

A completed nomination form should be submitted to the Director of the International Maritime Academy,\* Trieste, Italy **through the Italian Embassy**, with a copy to the IHB Monaco\*\*. Nominations should be made as early as possible, using a separate form for each nomination, indicating clearly the Government's priority if more than one participant is nominated:

1. FAMILY NAME.....  
FIRST NAME.....  
OTHER NAME .....
2. Mailing address .....  
.....  
.....  
Telephone .....  
Fax .....  
E-Mail .....
3. Nearest airport where air travel will commence and terminate:  
Name of airport .....  
Location .....
4. Date of birth .....
5. Sex:    Male            Female
6. Place of birth.....
7. Nationality.....
8. Passport No. ....
9. Date and Place of Issue .....

---

\* International Maritime Academy, via Eduardo Weiss 15, 34127 Trieste, Italy.  
(Fax: +39 040 350322. e-mail: <imoima@imoimaisdn.inet.it>)

\*\* International Hydrographic Bureau, BP445, MC 98011 MONACO CEDEX, Principality of Monaco.  
(Fax: +377 93 10 81 40; e-mail: <info@ihb.mc>)

10. Person to notify in case of emergency:

Name.....

Address .....

.....

Telephone .....

Fax .....

E-Mail .....

11. Present position and description of duties .....

.....

12. Educational background.....

.....

.....

13. Previous experience .....

.....

.....

Nominee's signature .....

**The above-mentioned person is nominated as our first/second possible participant in the course**

Name and signature of Government official authenticating this nomination.....

Title .....



**ACCEPTANCE FORM**

I hereby accept the invitation of the International Maritime Academy (IMA) to participate in the Course on Hydrographic Data Management (30 August to 3 December 1999).

I confirm that:

1. I will refrain from engaging in political, commercial and any activities other than those governed by the course programme;
2. I will advise the Academy immediately if I am unable to attend the course; and
3. I will travel to Trieste, Italy and return to my home country at the end of the course, as appropriate, by the route designated by the Academy.

Signature of Participant .....

Name of Participant .....  
(Printed)

Address .....  
.....  
.....

Date .....