



Building Hydrographic Capacity On-Line and On-Site S-5B and S-8B

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IIC Technologies



Overview

- Motivation
- International Certification Scheme
- Global S-5B/S-8B – Design considerations
- IIC Academy / Deakin University
- Participants
- Practicals & Final Field Project
- Future



Motivation

Institutional

- Demand for personnel has exceeded supply
- Loss of trained personnel to other markets
- Increased contracting out by HO's to Industry
- Employee retention / career path / marketability
- Hydrographic Certification

Individual

- Cost of training travel, accommodations.
- Pressure of life / work / education balance
- Career growth, Hydrographic Certification, CPD
- Connected globally



Hydrographic Certification (Level 0, 1 and 2)

7.1 It is recommended that an ACLS Certified Hydrographer (CH or CHTech) or equivalent Certification recognized by the FIG/IHO/ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (IBSC), be employed as part of the onsite team, for the duration of a project. These certifications will constitute part of the technical rating criteria of this RFSA.

Canadian Hydrographic Service

UKHO Hydrographic Survey Specifications

Charge Surveyor

“The Charge Surveyor must be accredited to HPAS Level 1 or 0 (or equivalent) and/or degree level hydrographic surveying qualification from an IBSC Category A recognised course

Australian HydroScheme Industry Partner Program - Statement of Requirement:

3.2 Surveyor in Charge (SIC)

The Contractor shall identify the SIC in their Survey Management Plan (SMP). The SIC is to be an AHSCP certified Level 1 Surveyor (CPHS1) and in date for Continual Professional Development (CPD) as per the list of certified Surveyors on the SSSI website. The SIC will be responsible for:

Hydrographic Certification Schemes



UK
Germany
France
Belgium
Netherland
Luxembourg
South Africa
Italy

Mutual Recognition

Cat A



Cat B



USA

Mutual Recognition



Canada

Mutual Recognition



Australia / New Zealand

Mutual Recognition



Approaches to Certification

Generally

Fast Track – Provides a concise and clear path to certification whereby the applicant has graduated from an IBSC recognized **Category A or Category B** educational program.

Medium Track – Provides a more complex approach to certification. The applicant has graduated with a **BSc in Geospatial Sciences (or equivalent) and has taken additional focused hydrographic surveying subjects.**

Slow Track – Provides a complicated, but achievable, approach to certification. **The applicant has graduated from a technical college or similar.** In this situation, the applicant is required to show proof of significant additional geospatial and hydrographic learning.



IBSC Recognized Programs

- 3-year time frame for completion
- Global Delivery (anywhere, anytime)
- Partnering with local institutions

N° 193

FIG/IHO/ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (IBSC)



Certificate of Recognition
IIC Technologies Academy (India)

The FIG/IHO/ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers, having reviewed the Programme "Hydrographic Surveying Programme (Global Delivery)" against the Standards of Competence for Category "B" Hydrographic Surveyors, S-5B, Edition 1.0.1, and being satisfied that it meets the requirements prescribed for a Category "B" programme hereby awards this certificate of recognition for a period of six (6) years.

Signed at Monaco

Ron Furness
Chair of the Board
This day the 5 April 2019

S-5B

N° 210

FIG/IHO/ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (IBSC)



Certificate of Recognition
IIC Technologies Academy (India)

The FIG/IHO/ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers, having reviewed the Programme "Marine Geospatial Information (Portable Delivery)" against the Standards of Competence for Category "B" Nautical Cartographers, S-8B, Edition 1.0.0, and being satisfied that it meets the requirements prescribed for a Category "B" programme hereby awards this certificate of recognition for a period of six (6) years.

Signed at Monaco

Ron Furness
Chair of the Board
This day the 29 October 2020

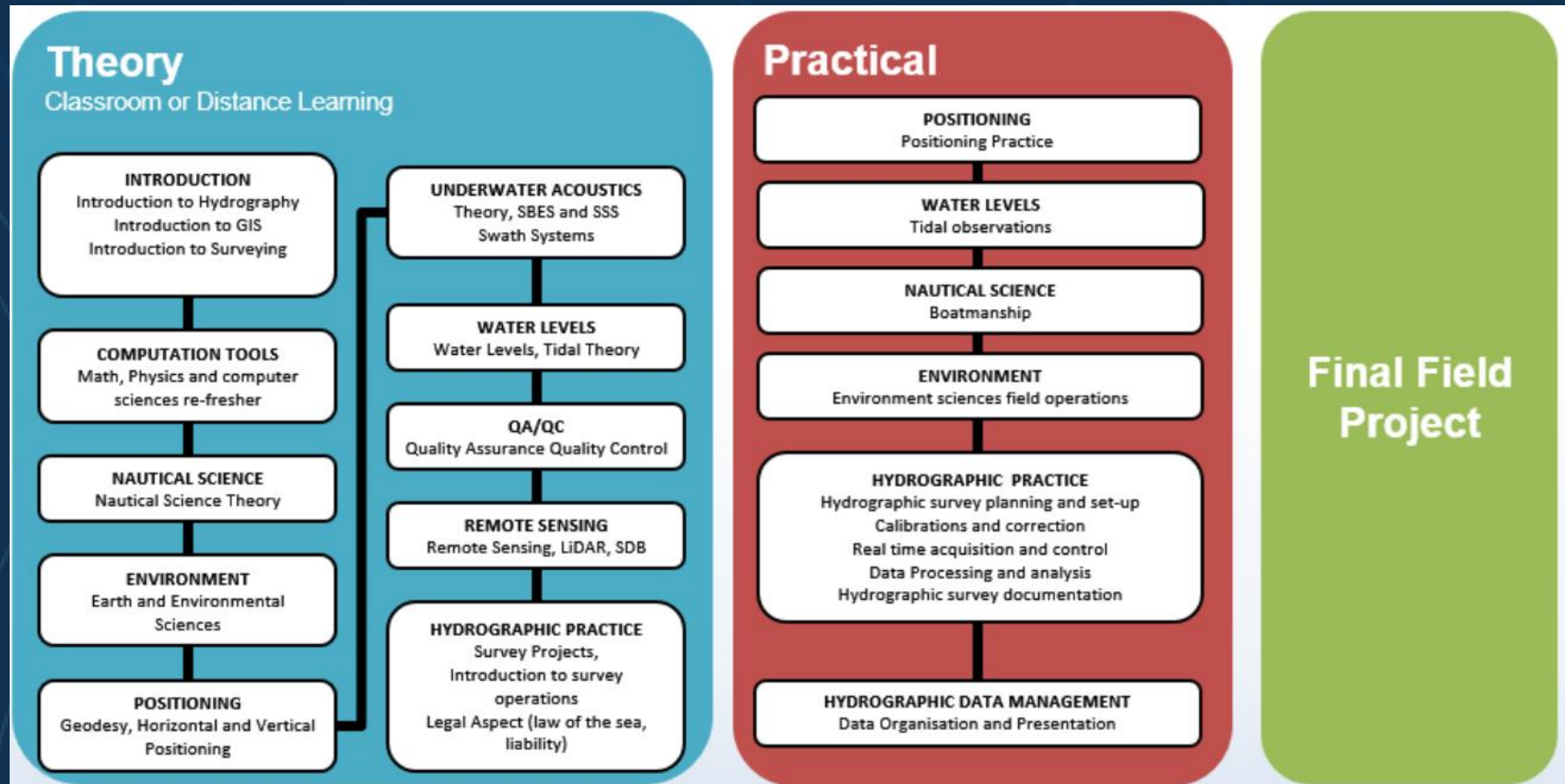
S-8B



IIC Academy Cat S-5B Course Design and Delivery

On-line
(13 weeks content /
30 weeks to complete)

On-Site (Globally)
3 weeks 4 weeks



IIC Academy Cat S-8B Course Design and Delivery

On-line

(22 weeks content / 30 weeks to complete)



Foundations of Marine Geospatial Information (10 Days)

- Introduction to Nautical Cartography
- Charting International framework and organizations
- Basic concepts of Cartography



Data Assessment, Compilation and Production (32 Days)

- Essential aspects of Nautical Chart production
- S-57 Object Catalogue
- Data Sources and Production Tools



Production and Validation (32 Days)

- Evaluation and Categorization of Bathymetric Surveys, CATZOC
- Workflow and Process Design
- ENC Production, Quality Management and S-65
- Chart Proofing and Printing, Raster Chart Production

Marine Environment: Physical Characteristics and Legal Issues (6 Days)

- Elements of Geology, Geophysics, Oceanography and Maritime Law
- Marine Environment and Cartography



Marine Spatial Data Infrastructure (5 Days)

- Concepts, Evolution
- Practical Deployments
- Role of MSDI in National and Regional Development









Remote Sensing (5 Days)

- Concepts, Sensors
- Data Formats and Preparations
- Remote Sensing in Cartography





Web-based Learning Components

| | | | | | |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| Webinars | Presentations Contents Videos | Quizzes Short Tests | Assignments Exercises | Forum | Tutoring (if required) |
| Instructor led | Self-paced reading Instructor monitors progress time | Self-paced Instructor monitors re-takes Instructor validates results | Interaction with instructor Instructor corrects and guides | Instructor moderated Instructor assesses student participation | Instructor led Individual students or small groups |



Category S-5B Program (Example)



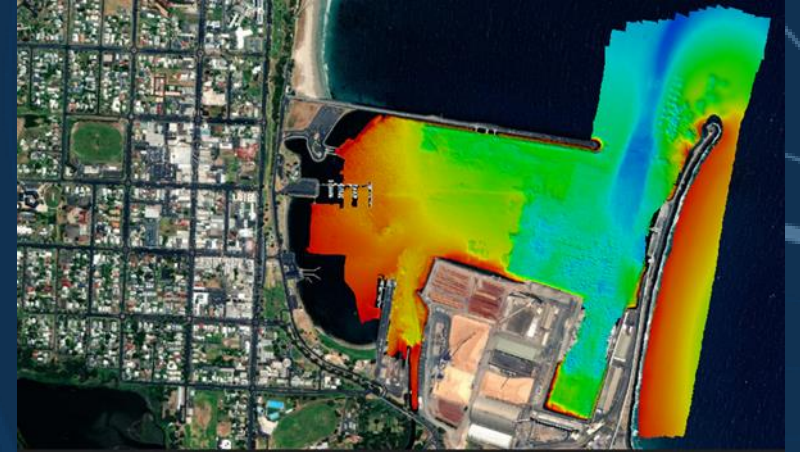
Partnership



1st On-line

- Commenced September 2024
- Practical & Final Field Project – May 2025
- students graduated – June 2025

S-5B Practicals and Final Field Project



S-8B Practicals and Comprehensive Cartographic Project





2024 and Beyond (Partnering)

- Australia 2024 – 2025 program registration has commenced
- On-Line starts September 2024 (www.iicacademy.com)
- Partnering: With Deakin University
- Engagement with Govt, Pacific Islands and CB bodies

- USA 2024 – 2025 program registration has commenced
- On-Line starts September 2024 (www.iicacademy.com)
- Partnering: With Port of Tampa Bay
- Engagement with Govt, Pacific Islands and CB bodies



Thank You

www.iicacademy.com

For more information on the S-5B course or to register:

Email:
hydrographicsurveyor@iicacademy.com

For more information on the S-8B course or to register:

Email:
nauticalcartographer@iicacademy.com