

Ocean Mapping Education at UNB: A Canadian FIG/IHO/ICA Category “A” Undergraduate Engineering Program

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The Ocean Mapping Group in the Department of Geodesy and Geomatics Engineering at the University of New Brunswick (UNB) has a strong history of hydrographic education stretching back many decades. That record includes undergraduate and graduate programs and student training in all aspects of ocean mapping theory and research. This paper outlines the past, present, and future of hydrographic education at UNB.

In 2021, the UNB Bachelor of Science in Geomatics Engineering degree received recognition from the FIG/IHO/ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers for meeting the requirements of S5-A, the Standard of Competence for Category “A” Hydrographic Surveyors. This important recognition from the FIG/IHO/ICA and the established pathway for UNB students to receive certification under the Association of Canada Lands Surveyors (ACLS) International Hydrographer Certification Scheme establish a pipeline to support international and national workforce development needs. The undergraduate program at UNB is also integrated with graduate student training and research programs, providing a multifaceted educational experience.

While there are a variety of pathways to enter the UNB program, an undergraduate degree program with a hydrographic surveying focus requires attracting high-school students to the field. Therefore, a week-long introductory camp focused on ages 15-18 has begun in 2022 to introduce ocean mapping as a career. The program is run in partnership with the Huntsman Marine Science Centre in St. Andrews, New Brunswick, under their new Ocean STEAM program.

Across Canada, a broader collaborative focus is being built towards hydrographic education under the umbrella of the Canadian Ocean Mapping Research and Education Network (COMREN), a MEOPAR Community of Practise. This work includes developing educational and outreach material, field camp and experiential education opportunities, and short courses to support hydrographic skills development for graduate students and industry.