Introduction to River Ice Engineering

November 16-18, 2020

$920 + HST – Online Course

In collaboration with Epic Training

Program Overview

River ice causes prevalent problems in Canada and will be addressed in this course. Breakup and subsequent ice jams cause significant damage in some areas. This course will provide an introduction to river ice engineering and is tailored to an audience of non-specialist professionals.
From the formation of ice covers to breakup and ice jams, this course will illustrate the river ice processes and identify common problems associated with these processes through case studies.

Learning Objectives

At the end of the workshop, participants will be able to;

- Understand river ice processes and river ice engineering applications
- Discover the tools and methods used in river science and engineering
- Develop a fundamental understanding of river ice characteristics and behavior
- Appreciate the challenge confronted in managing river ice
- Apply the theory of river ice processes to practical applications associated with river ice management.

Course Outline

- General Overview
- River ice properties
- Freeze-up processes
- Freeze-up time (Excel numerical exercises)
- Numerical modelling
- Monitoring River ice covers
- Ice thickness predictions (Excel numerical exercises)
- Ice jam processes
- Ice-jam flood forecasting

Who Should Attend?

Professionals involved in the management of river ice engineering projects, including; Water Resource Engineers & Specialists, River Engineers, Environmental Specialists, Project Managers, Civil Engineers, Technologist & Technicians and Engineering Consultants.

Your Instructor

Karl-Erich Lindenschmidt

Karl is an associate professor at the University of Saskatchewan and member of APEGS.
He holds a Bachelor of Science in Mechanical Engineering from the University of Manitoba, a Master of Applied Science in Mechanical Engineering from the University of Toronto, and a PhD in Environmental Engineering from the Technical University of Berlin. Before his appointment at the University of Saskatchewan, Karl was with the Manitoba Water Stewardship as a hydrologic modelling research engineer where one of his research topics involved monitoring and modelling river ice processes along the Red, Assiniboine and Dauphin Rivers.
His knowledge on river ice processes aided Red River Floodway operations, the Ice Jam Mitigation Program along the lower Red River and flood risk management of the Lake St. Martin/Dauphin River System. He has also extended his portfolio of river ice work and research to include the Slave River in the Northwest Territories, the Peace and Athabasca rivers in Alberta, and the South Saskatchewan and Qu'Appelle rivers in Saskatchewan.

Pre-Requisites

None

Duration

3 Days