

This comprehensive two-day course equips participants with in-depth knowledge and practical skills in pipeline defect assessment and the interaction of defects in pipeline integrity management.

The course covers the evaluation of pipeline imperfections, including corrosion, gouges, dents, cracks, and weld imperfections, as outlined in CSA Z662 Clause 10.10. Participants will also explore the complexities of defect interactions and the implications for pipeline integrity management, supported by real-world case studies.

Pipeline Integrity Institute, within the Faculty of Applied Science at the University of British Columbia, is excited to host this two-day short course in Calgary from November 5-6 2024, in partnership with The Competence Club.

The Pipeline Integrity Institute has been, and remains, the leader in the provision of undergraduate pipeline engineering courses. It is the first institute in North America to provide such course content to engineering students.

[pipeline.integrity@ubc.ca](mailto:pipeline.integrity@ubc.ca)

## Pipeline Integrity Institute

University of British Columbia

**Course Location**  
Calgary, AB, Canada

**Register Here**  
[pipeline.integrity@ubc.ca](mailto:pipeline.integrity@ubc.ca)

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[competence.rosen-group.com](http://competence.rosen-group.com)



# Pipeline Integrity Institute

at the University of British Columbia

with

## The Competence Club

Presents this short course on

# Pipeline Defect Assessment & Threat Interaction in Pipeline Integrity Management



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DE PIPELINE



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# PIPELINE DEFECT ASSESSMENT & THREAT INTERACTION IN PIPELINE INTEGRITY MANAGEMENT

**Day 1: November 5, 2024**

## TOPICS COVERED:

- Corrosion (volumetric metal loss)
- Gouges
- Arc Burns
- Dents
- Pipe Body Cracks
- Girth Weld Imperfections
- Seam Weld Imperfections
- Ripples, Wrinkles & Buckles
- Other Imperfections (e.g., unacceptable bending strain)
- Capabilities of ILI Technologies
- Detection, Identification, and Sizing of Defects
- Degradation of Data
- Validation Results
- Growth of Imperfections
- Comparison of ILI Runs and Integration of Technologies
- Introduction to Interacting Features
- Case study: Real-world defect assessment and implications for pipeline operations.

**Day 2: November 6, 2024**

## TOPICS COVERED:

- Interacting Imperfections of the Same Classification (e.g., dent with dent, corrosion with corrosion)
- Interacting Imperfections of Different Classifications (e.g., dent with metal loss, buckle in bending strain)
- Other Threats (e.g., External Loading)
- Combined ILI Technologies for Comprehensive Assessment

## Learning Objectives

1. Understand and apply CSA Z662 Clause 10.10 acceptance criteria for evaluating pipeline imperfections.
2. Gain an awareness of engineering assessment techniques to assess defects.
3. Assess various types of pipeline defects, including corrosion, gouges, dents, and cracks.
4. Analyse the capabilities and limitations of different In-Line Inspection (ILI) and field NDE technologies for imperfection detection and sizing.
5. Evaluate the interaction of multiple defects and their impact on pipeline integrity.
6. Integrate data from different ILI technologies to assess defect growth and predict future risks.
7. Apply knowledge of pipeline defect assessment to real-world scenarios through case studies.



## Chris Holliday Lead Trainer

Principal Engineer, ROSEN Integrity Services, Newcastle upon Tyne, UK

Chris is a registered Professional Engineer in British Columbia, Alberta, and Saskatchewan, and a Chartered Engineer with the Institute of Mechanical Engineers in the UK. He has specialized in pipeline integrity consultancy, corrosion assessments, dent strain, fatigue, bending strain, cracking, detailed engineering assessments, and developed new services for the pipeline industry. Chris has delivered lectures on In-Line Inspection technologies and pipeline defect assessment, and authored technical papers on pipeline deformation assessments using analytical and Finite Element Analysis methods, and structural analysis in landslide areas. An active contributor to pipeline codes and standards development, he serves on the Technical Subcommittee on Operations and Systems Integrity for the Canadian Standards Association Z662 Oil and Gas Pipeline Systems standard. He is also involved in the CSA Z662 Dent Assessment and ILI Assessment Working Groups, and contributes to the next edition of API RP 1183.

# REGISTRATION

## COURSE INFORMATION:

Scan QR code or visit:  
<https://pii.engineering.ubc.ca/education/short-courses/short-course-pipeline-integrity-management-nov-2024/>



## REGISTRATION ENQUIRIES:

[pipeline.integrity@ubc.ca](mailto:pipeline.integrity@ubc.ca)

## REGISTRATION FEES:

- \$1000.00 CAD per attendee
- \$100 CAD discount for:
  - PII Industry Partner companies
  - Companies registering 2+ employees

## WHO SHOULD ATTEND?

- Pipeline Engineers
- Integrity Specialists
- Integrity Management Professionals
- Quality Assurance and Quality Control
- Personnel
- Operations and Maintenance Managers
- Technical Staff involved in pipeline safety and compliance
- Professionals seeking to enhance their understanding of pipeline defect assessment and integrity management

## COURSE FORMAT?

This is a classroom-based course.

- **Date and time:** 5-6 November 2024, 08:30 - 16:30 MDT.
- **Course venue:** The Westin Calgary – 320 4th Ave SW, Calgary, AB T2P 2S6, Canada
- **Pre-Course Training (optional):** The Competence Club offers four complimentary e-learns to help you acquire the required knowledge and enhance your skills for the course. The pre-course training takes 8 hours and is self-paced for your convenience.

**More training opportunities from University of British Columbia and The Competence Club coming in spring 2025.**