



## DIGITAL SOLUTIONS

# SYNERGI PIPELINE SIMULATOR ADVANCED - SURGE ANALYSIS

Course code: SY-49  
Duration: 3 days

**Prerequisite:**  
Previous knowledge of Synergi Pipeline Simulator is required, which could be from experience or from having taken the SY-45 Synergi Pipeline Simulator (SPS) standard course within the last six months. Prior knowledge of pipeline operations and fundamental surge hydraulics is required.

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## DESCRIPTION

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This training course focuses on surge analysis modelling for valve closures, pump trips, bubble collapse, and advanced workflows. Class size is limited to a maximum of 12 students. Class discussions and problem-solving workshops will include, but may not be limited to the following topics:

- Model configuration and best practices
- Results analysis
- Valve closure modelling
- Pump trip modelling
- Modelling waterhammer due to bubble collapse
- Modelling surge relief valves and other relief systems
- Fluid properties and equations of state options
- Exporting results to support pipe stress analysis (i.e. Caesar II)
- Using Model Lab to improve work efficiency
- How to speed up your simulations

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## LEARNING OBJECTIVES

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You will learn how to configure various types of surge models, analyse results, and improve surge analysis study productively.

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## TARGET GROUP

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Synergi Pipeline Simulator users who want to grow their surge analysis modelling skills and workflow efficiency.