



Course duration

**2 days**

Location

- Tasmania, Australia
- Client site as negotiated
- Web-based delivery possible

# Introduction to flood modelling

Modelling has become increasingly an important tool for water managers, planners and governments as they seek to understand and manage risks associated with floods.

The aim of the course is to increase understanding of the challenges in modelling floods, basic flood frequency analysis, regional flood estimation techniques and real-time forecasting. The course covers the difficulties of estimating rare events, flood frequency estimation, hydrometric data interpretation, design floods and modelling floods.

The practical aspects will include Entura's working knowledge and expertise, which is backed up by almost 100 years of experience in developing and operating power and water infrastructure as part of Hydro Tasmania, Australia's largest renewable energy producer.

After completing the course, participants will have an understanding of the challenges in modelling floods, basic flood frequency analysis, regional flood estimation techniques and real time forecasting.

## Course content

### Hydrologic analysis

- The hydrologic cycle
- Hydrologic data collection
- Uncertainties in water assessment and how to minimise them
- Runoff coefficients
- Flow duration analyses

### Hydrologic modelling

- Catchment delineation
- Rainfall-runoff modelling
- Model types
- Calibration and validation techniques

### Flood modelling

- Challenges with modelling floods and estimating rare events
- Flood frequency estimation
- Design floods
- Event modelling
- Continuous modelling and forecasting

## Participant profile

- Junior hydrologist
- Technical or engineering staff
- Middle to senior management with project management or oversight responsibilities

## Learning objectives

To provide participants with a high level understanding of hydrologic modelling techniques and their application

## Learning methods

- Lectures
- Discussions
- Case studies and scenarios

## Course providers

Entura's lecturers include:

- accredited training professionals
- technical specialists and professionals with extensive experience and qualifications in hydrology.

## Customisation

The course can be customised to suit particular regional or organisational emphasis or to match participants' skill level or role.



### Course Director

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