

# Echoview training courses



An Echoview® training course will provide you with the skills to understand your single-beam and/or multibeam echosounder data, and to process it efficiently and accurately using Echoview.

We offer a range of course options to suit your varying needs:

- Online or face-to-face
- Public or private
- Fundamental or Advanced

Whether you're a beginner or a seasoned veteran, we believe there is always more to learn with respect to:

1. Echosounder theory
2. Digital signal processing
3. Echoview features
4. Data-processing workflow

Please visit the Echoview website for public course pricing and a schedule of public courses for a variety of time zones:

<https://www.echoview.com/products-services/training>

If you can't find a public course to suit and/or you're interested in a private course, please email us at [training@echoview.com](mailto:training@echoview.com) and let's work something out!

## Which course option is for me?

### Online or face-to-face?

Both types of course are live (instructor led). Sessions typically consist of an introduction to the topic(s), follow-me exercises with Echoview using a great selection of datasets, and of course plenty of opportunity for questions and discussion!

Online courses are awesome for reducing your carbon footprint, saving you time and money, and enabling you to learn from the comfort of your office or home.

Face-to-face courses will always be superior for providing you with a fully immersive, interactive experience, and for helping to keep you disciplined, on track, and focused.

### Public or private?

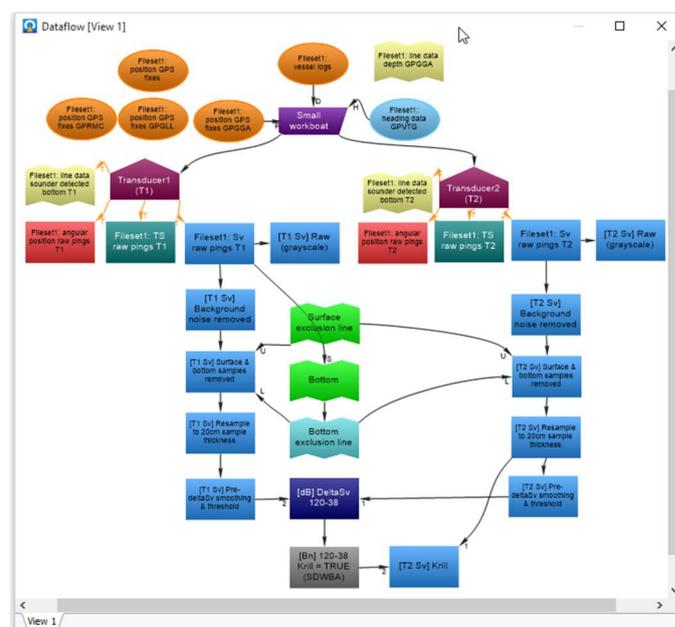
Public courses are perfect if there are one or two of you and one of our scheduled courses meets your needs.

Private courses really come into their own if there is a group of you and/or you wish to focus on specific topics that are not addressed in one of our scheduled courses. For individuals and groups, private courses enable you to focus on your own data and research questions at a time and/or location that suits you. For groups, private courses can be great team-building exercises, enabling you to transfer knowledge and skills across your team.

### Fundamental or Advanced?

Fundamental courses are for those just starting out with echosounding and Echoview, or those with some experience who wish to consolidate and expand their fundamental skills.

Advanced courses are for those with a good understanding of echosounder theory and Echoview who wish to explore specific topics and more advanced use of the software.



A simple two-frequency algorithm for classifying Antarctic krill, constructed in Echoview's Dataflow window

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## What does a course involve?

When it comes to processing echosounder data and using Echoview, we have identified four learning units and a range of associated topics:

1. Echosounder theory
  - a) Underwater sound
  - b) Echosounders
  - c) The echosounder equation (aka the active-sonar equation)
2. Digital signal processing
  - a) Signal domain
  - b) Digital image processing
  - c) Statistical signal processing
  - d) Machine learning
3. Echoview features
  - a) Echoview data-processing tools and concepts
  - b) Echoview data model/hierarchy
  - c) Applying settings
4. Data-processing workflow
  - a) Data exploration
  - b) Data calibration
  - c) Data cleaning (unwanted samples, variance, noise, signal attenuation)
  - d) Target detection and tracking (surface, point, and volume targets)
  - e) Target classification (surface, point, and volume targets)
  - f) Target characterization (echo counting, echo integration)
  - g) Echosounder characterization (instrument calibration)
  - h) Automation (templates, COM scripting)

## Your learning requirements

The topics covered and the focus within each topic (e.g. single-beam/multibeam, stationary/mobile, point-/volume-targets etc.) will be tailored to suit the course level (Fundamental/Advanced) and the individual learning requirements of the course attendees. We will assess your learning requirements as part of

the registration process to ensure you get what you need out of the course.

## Fundamental courses

Fundamental courses are 5 days in duration, during which we will take you on a systematic walk through each topic within the four learning units. The idea is to provide you with a hands-on overview of everything you can expect to come across when processing echosounder data.

Face-to-face courses involve four 90-minute sessions per day, while online courses involve two 2-hour sessions per day. Reading and exercises are recommended as homework before, during, and after the course to help you prepare for, consolidate, and enhance the course learning. There is a considerable amount of material to cover, and 5 days is a surprisingly short amount of time!

## Advanced courses

Advanced courses are online only and will vary with respect to the number of sessions, topics covered, delivery style, and homework. Individual sessions will still be limited to 2 hours each and no more than 2 sessions per day.



We will provide you with all the necessary materials for your training session

## Contact us

For more information about Echoview training, or to organize your next course, please contact [training@echoview.com](mailto:training@echoview.com).