

Marine Mammal Research Course

Cape Town, South Africa — November 2019

Course Summary. This academically intensive course is targeted at students, postgraduates and researchers with a strong interest in a career in marine mammal and marine top-predator research.

Based on decades on cumulative team experience this course will provide you with a sound knowledge of survey design, research tools, data collection and analytical methods to enable you to effectively set up and conduct a research study on whales and dolphins and efficiently analyse your data.

Course leaders: Dr Simon Elwen & Dr Tess Gridley.

Date: 04 Nov to 29 Nov. **Full Course:** GBP 1190 / **Per week:** *Pro rata*
Discounts offered for SADC residents

More details: Info@seasearch.co.za www.seasearch.co.za

Course Content

- Survey & experimental design
- Photographic & video methods
- Acoustic research methods
- Shore based tracking
- Behavioural data collection
- Intro to GIS / Telemetry / Strandings / Boat skills

Modules consist of a combination of lectures, computer based and field-based practical exercises.

Non-Profit research group based in Cape Town, South Africa which supports several academic researchers. We conduct research on a wide range of ecological, acoustic and behavioural questions on the whales and dolphins of southern Africa with the goal of producing peer reviewed research as the backbone for education, conservation and management.



About us — We are a



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Cetaceans are wide-ranging, top predators that live in a three dimensional environment. Marine-mammal researchers often need novel and unique approaches to study these animals which aren't well covered in undergraduate courses. We have developed this course based on our own experiences of working with top research groups, setting up multiple studies in southern Africa and training 100s of students and interns in field techniques and data processing. This course aims to provide students and early career researchers with a solid understanding of currently available research methods, tools and software in the field of cetacean research and their relative benefits, assumptions and limitations.

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Course Outline and Content

Survey & Experimental Design—Week One

Focusing the goal / Abundance estimation (mark-recapture and line transect including acoustic / Impact & rapid assessment studies / Platforms of Opportunity / Citizen Science

Photographic & Video Methods—Week Two

Camera function and use / Data collection goals / Mark-recapture analysis & considerations (image quality, mark type, distinctiveness etc) / Photogrammetry / Automated methods

Acoustic research methods—Week Three

Introduction to Bioacoustics / Physics of Sound / Equipment—types and limitations / Study design / Software and sound analysis / Automated methods

Shore based tracking & Behavioural data—Week four

Theodolite and video tracking / Study design and methods for collecting and processing Behavioural data (field, video and acoustic)

Shorter modules—Week Four

Introductory GIS (R and QGIS) / Telemetry / Strandings data and necropsy

Practical & Software in section

Mark-recapture in lab and practice.

Line transect pre-set experiment / Paper discussions / Designing a study / Cit-Sci Interviews. Distance, Mark, RMark

*Camera field practise. Lab photo ID exercise. **Sea day**—Photographing Heaviside's dolphins. Managing photo databases, Gimp, FinFindR, I3S suite, Flukebook etc.*

*Using and setting up a range of acoustic recording systems. **Sea day** recording dolphins and ambient sounds. Raven, Audition, CPODexe, PAM-Guard etc.*

Setting up a station and database. Stills, video or theodolite? Designing a behavioural study. Field practicals.

Basics of GIS (projections, map making, possibilities). Overview of telemetry instrumentation and analysis approaches. Intro to strandings research.