



- SHORT COURSES -

1) Biologia da Conservação de Elasmobrânquios Marinhos (in Portuguese)

Short course sponsored by SBEEL and presented by Dr. Fabio dos Santos Motta (UNIFESP) and Dr. Rodrigo Risi Barreto (ICMBio/CEPSUL).

Covered topics: General aspects of biology and ecology; Major threats and emerging issues; Systematic Conservation Planning; Conservation and management strategies and policies.

Total course workload: 6 hours

Number of students: 30

2) Fisiologia de Elasmobrânquios (in Portuguese)

Short course sponsored by SBEEL and presented by Dr. Natascha Wosnick (UFPR).

Covered topics: Morphological aspects related to physiology; basic concepts of Animal Physiology; Physiology of osmoregulation; Physiology of Thermoregulation; Reproductive Physiology; Sensory Physiology; Stress physiology; Ecophysiology and its application in the context of the management and conservation of sharks and rays.

Total course workload: 6 hours

Number of students: 30

3) Genética da conservação de elasmobrânquios: resolução taxonômica, conectividade e história de vida (in Portuguese)

Short course sponsored by SBEEL and presented by Dr. Rodrigo Rodrigues Domingues (UNESP).

Covered topics: Population genetics; Stock identification; Molecular methods for species identification (PCR-multiplex, real-time PCR, IOC Barcode) and their applications for identification of illegal capture, mislabeling and taxonomic resolution; Impact of oceanographic variables on gene flow; Historical patterns and processes responsible for the current distribution of elasmobranch species; Methods of estimating abundance, through the effective population size (N_e); State-of-the-art of genetic data inclusion in management plans and conservation policies for elasmobranchs in the world.

Total course workload: 6 hours

Number of students: 30

4) Técnicas multivariadas para estudios de ecología de comunidades: aplicaciones en elasmobranquios (in Spanish)

Short course sponsored by Squalus and presented by Dr. Andrés Felipe Navia and Dr. Paola Andrea Mejía-Falla (Fundación Squalus).

Covered topics: Selection and application of multivariate analyses for ecological studies, based on quantitative variables (as richness, diversity, abundance of species or preys, among others) and their relationships with biological variables (e.g. sizes, ages) and environmental (depth, substrate, seasons, etc.). For this purpose, different tools as Correspondence Analysis (AC), Principal Component Analysis (PCA), nMDS, Cluster Analysis, Similarity Analysis (ANOSIM), Percentage Similarity Analysis (SIMPER) and PERMANOVA will be used.

Total course workload: 6 hours

Number of students: 25

Requirements: One notebook computer per person or per couple; R Wizard software installed and running (<http://www.ipez.es/RWizard/>); PAST software installed and running (<http://folk.uio.no/ohammer/past/>).

5)Introduction to R programming (in English)

Short course sponsored by AES and presented by Dr. Lindsay Davidson (Simon Fraser University), Dr. Sebastian Pardo (Dalhousie University), Dr. Dovi Kacev (National Marine Fisheries Service) and Dr. Christopher Mull (Simon Fraser University).

Covered topics: This course is intended for people who are interested in learning the basics of programming using the R statistical programming language. No experience in R or programming is necessary! Whether you are an early career scientist or a professional looking to expand your skill set, this course will open the door to a powerful tool that is quickly becoming the gold standard in the biological sciences and essential for analyzing ecological data. This course will cover the basics of programming in R, including writing code, loading data, data manipulation (subset, min, max, summary tables), data visualization, elementary data analysis (e.g. t-test, anovas), and linear modeling. It will also provide a guide to get you acquainted with the (seemingly endless) resources available online, which will help you continue learning about R.

Total course workload: 6 hours

Number of students: 30

Requirements: Access to a computer with the latest version of R (v3.3 or greater, <https://www.r-project.org/>) and R Studio installed (<https://www.rstudio.com/>)

6) How to use social media to communicate your science to non-experts, and why you should (in English)

Short course sponsored by AES and presented by David Shiffman (University of Miami).

Covered topics: Social media has revolutionized how people communicate with one another. This has important implications for scientists, particularly those in environmental conservation, natural resources management, or related fields. Getting started can be confusing, but for researchers skilled in using these tools, there are countless benefits and few costs. In this hands-on training workshop suitable for beginners or intermediate social media users, award-winning science communicator Dr. David Shiffman will teach you the basics of using three of the most common online tools for science communication: twitter, Facebook, and blogs. We'll also discuss case studies, and some advanced tips and tricks. Bring a laptop, and bring your questions.

Total course workload: 6 hours

Number of students: 30

Requirements: One notebook computer per person