

# Research Methods in Marine Biology B (4 points, 2024) Summer Semester

# Course Schedule: Thursday 10:00-16:00

Instructors:

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# Teaching Assistants & Office Hours (tentative):

TBA

# Course Type: Workshop

## Course Level: M.Sc.

<u>**Pre-Requisites</u>**: Research Methods in Marine Biology A should be taken at the same year. The students will conduct the definition of the research question and research design during this pre-requisite course.</u>

## Course Overview:

In this course, the students will learn to use advanced methods in data analysis, data recording and sharing, and data presentation. Students will get familiar with physiology, molecular biology, and analytics methods and will gain experience analyzing data outputs. The students will receive lectures on the theoretical background of all these methods and on writing a research paper. At the end of the course, the students will submit a final report in the form of a research paper that includes an abstract, a short introduction, a description of the methods they used, results, and conclusions.

# <u>Topics</u>:

- 1. Data analysis and data presentation
- 2. Data recording and sharing (github, slack, digital notebook)



- 3. Physiology, molecular biology and analytics methods.
- 4. How to write a scientific paper

At the end of the course students will be able to: [Learning Outcomes]

- 1. Opening data sharing account and digital notebook.
- 2. Data representation via different platforms (R, Excel)
- 3. Analyze data output.
- 4. Use statistical tools to assess the significance of their results.
- 5. Write a research paper format report.

#### **Requirements**

100% Attendance

#### Grading:

- 60% Class assignments.
- 10% attendance and participation.
- 30% Final report

Website: Moodle