

Genomics:

An introduction to genome sequencing, data processing and analysis

6th and 7th of July 2021

14:00 to 16:00 (CET)

Both sessions will be online

Leibniz Centre for Tropical Marine Research (ZMT) GmbH
Fahrenheitstraße 6, 28359 Bremen, Germany



(Backgroundphoto: Mudassir Ali, Unsplash; Vector graphics: Vecteezy)

Instructor: Dr. Martin Helmkamp

Course description: Sequencing whole genomes has become feasible even for small labs, with wide-ranging applications in many fields, from medicine to conservation biology. However, the hurdles in the form of technical expertise required to sequence, process and analyze genome data remain high.

This course will provide a broad overview over the basics of genome research, aimed at researchers with little or no prior experience. The first session will cover how to plan a genome project, what sequencing technologies are out there, and what the basic workflow looks like. Practical exercises will include an introduction to the command line and how to process the raw data using bioinformatic tools. The second day will focus on more downstream steps, like genome assembly and annotation, and will end with a general discussion of best practices regarding data management and sharing.

Target group: The course is for all ZMT Alumni and Doctoral Candidates at ZMT. Guest researchers and interested Postdocs can participate as well.

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- Credit:** Participation in both course days is required. You can receive a certificate of attendance for the course.
- Preparation:** Windows users will need to install a command line shell like Cygwin to follow the practical exercises. Preinstalling other programs may be helpful, and will be announced on the course website closer to the course date.