

ISOS Course

Biostatistics

Dr. Mark Lenz, GEOMAR

28 September - 2 October 2015 | 09:00 – 16:00 hrs

The course gives a general introduction to the design and analysis of experimental studies in the life sciences (biology, ecology, medicine, biochemistry, biogeochemistry). Its contents range from the logical design of experiments to the statistical modeling of data. All lectures will be supplemented by practical exercises using the free computing software R.

Contents:

scientific models

hypotheses | populations | samples | variables | data quality levels | replication and pseudoreplication
| parameters of location and spread

hypothesis testing

power analysis | assumptions of statistical tests | statistical modeling | linear regression |
diagnostics in R

Analysis of Variance (ANOVA) | post-hoc testing and contrast analyses | mixed effect models
repeated measures designs | multiple linear regression | Analysis of Covariance (ANCOVA) |
model building and model simplification

Important note: If there are not enough participants to fill this course, it will be incorporated into the Biostatistics course on 5 -9 October. We will inform you about this at the application deadline.

Application deadline: 14 September 2015

Venue: t.b.a.

ISOS PhDs have priority in our courses.

Child care can be provided if we have two weeks notice in advance.

Please register online at

www.futureocean.org/isos