Pensum BIO300B
Forelesninger, forelesningsnotater og øvinger.

Syllabus BIO300B
Lectures, lecture notes and exercises.

Topics in BIO300B
1) Study design (no exercises)
2) Introduction to R
3) Introduction to statistics
4) Introduction to linear models
5) Multiple linear models
6) Linear mixed effects models including repeated measurements
7) Generalized linear models and Generalized linear mixed effects models
8) Introduction to Bayesian statistics
9) Survival analysis
10) Multivariate statistics

Recommended literature, where books most useful for students that are relatively new to both statistics and R are shown with underlined title:

Planning of Experiments by D.R. Cox, ISBN 0471181838. Covers topic 1.

An Introduction to R by W. N. Venables, D. M. Smith and the R Core Team. Available for free at: https://cran.r-project.org/doc/manuals/r-release/R-intro.pdf. Covers mainly topic 2, but also parts of topic 4 and 7.

Introduction to the Practice of Statistics by David S. Moore, George P. McCabe and Bruce A. Craig. ISBN 9781464158933. Used in Stat 101 at Univ. Bergen. Covers mainly topic 3.

The R Book by Michael J. Crawley, ISBN 978-0-470-97392-9. Covers topic 2, 3, 4, 5, 6, 7, 8, 9 and 10 (but to varying degrees).

Mixed Effects Models and Extensions in Ecology with R by Alain F. Zuur, Elenea N. Ieno, Neil J. Walker, Anatoly A. Saveliev and Graham M. Smith. ISBN 978-0-387-87457-9. Covers topic 6 and 7 but also topics not covered in BIO300B.

Statistical Rethinking by Richard McElreath. ISBN 978-1-4822-5344-3. Covers topic 8.

Data Analysis in Community and Landscape Ecology by R.H.G Jongman, C.J.F. Ter Braak, and O.F.R van Tongeren. ISBN 0521475740. Covers topic 10.

Vegan: an introduction to ordination by Jari Oksanen. Available for free at: https://cran.r-project.org/web/packages/vegan/vignettes/intro-vegan.pdf. Covers topic 10.

ggplot2, Elegant Graphics for Data Analysis by Hadley Wickham. ISBN 978-3-319-24275-0. Covers how to make plots in R by using a library called ggplot2, which is the one used in BIO300B.