(2 credits) 001-2-4042

Weekly Lecture Hours	Exercise	Laboratory	Field Trip
2			

Prerequisite: Statistical Methods by A. Zemel (or equivalent course elsewhere) and basic knowledge of Matlab (the examples and exercises will involve Matlab programming).

• The course requirements include the submission of all exercises.
• The grade is determined by the final project and the exercises.

The Course includes:
1. Introduction:

- Probability Theory
- Distribution of Climate Variables
- Concepts in Statistical Inference
- Estimation

2. Confirmation and Analysis:

- Statistical Test of a Hypothesis
- Analysis of Atmospheric Circulation Problems

3. Fitting Statistical Models:

- Regression
- Analysis of Variance

4. Time Series:

- Time Series and Stochastic Processes
- Parameters of Univariate and Bivariate Time Series
- Estimating Covariance Functions and Spectra

5. Specific Statistical Concepts in Climate Research
6. Forecast Quality Evaluation

Recommended Reading:

- Von Storch H. and Zwiers F. W. (2003). Statistical Analysis in Climate Research, Cambridge University Press
- Wilks D. S. (2011). Statistical Methods in the Atmospheric Sciences, Third Edition, Academic Press

Lecturer: Golan Bel

trackfull degree