

Hydrogeology and Environmental Geoscience (Literature recommendations 1st Semester)

B0-TM1 Basic Statistics and Mathematics (Brauchler)

- Abramowitz M., Stegun I. A. (1968): Handbook of mathematical functions, Dover Publ.
- Bronshteyn I. N., Semendyayev K. A. (1997): Handbook of Mathematics, Springer, 3rd ed.
- Carslaw H. S., Jaeger J. C. (1959): Conduction of heat in solids, Oxford University Press, 2nd ed.
- Collatz L. (1973): Differentialgleichungen, Teubner, 5th ed.
- Crank J. (1975): The mathematics of diffusion, Oxford Science Publ., 2nd ed.
- Davis J. C. (1986): Statistics and data analysis in geology, John Wiley & Sons.
- Dransfeld K., Kienle P (1975): Physik II - Elektrodynamik, Oldenbourg.
- Eisenreich G., Sube R. (1996): Technical Dictionary of Mathematics – English / German / French / Russian, Langenscheidt, 4th ed.
- Freeze R. A., Cherry J. A. (1979): Groundwater, Prentice Hall.
- Gradshteyn I. S., Ryzhik I. M. (1994): Table of integrals, series, and products, Academic Press, 5th ed.
- Graham D., Graham C., Whitcombe A. (1995): A level mathematics, BPP (Letts Educational).
- Stephenson G., Radmore P. M. (1990): Advanced mathematical methods for engineering and science students, Cambridge University Press.
- Waltham D. (2000): Mathematics – A simple tool for geologists, Blackwell, 2nd ed.
- Yeh T.-C. J. (1989): One-dimensional steady state infiltration in heterogeneous soils, Water Resour. Res. 25, 2149-2159.
- Zachmann H. G. (1981): Mathematik für Chemiker, Verlag Chemie, 4th ed.
- Zwillinger D. (1998): Handbook of differential equations, Academic Press, 3rd ed.

B1-TM1 Fundamentals of Geology (Van den Kerkhof)

- Press F. and Siever R. (2002) Understanding Earth W.H.Freeman & Co Ltd; Auflage: 3rd Ed (evtl. 4th Ed) ISBN-10: 0716741172 # ISBN-13: 978-0716741176

B1-TM3 Geology of aquifer systems (Elbracht)

- Jörg Elbracht, Renate Meyer & Evelin Reutter (2007) Hydrogeologische Räume und Teilräume in Niedersachsen. GeoBerichte 3- 107 S., 25 Abb.; Hannover.

http://cdl.niedersachsen.de/blob/images/C38135100_L20.pdf

B2-TM1 Applied Statistics in Hydrology" (Willems)

Descriptive Statistics, Hypothesis Testing, Trends detection

- Helsel, D. R. and Hirsch, R. M. (1991): Statistical Methods in Water Resources. Techniques of Water-Resources Investigations of the United States Geological Survey, Book 4: Hydrologic Analysis and Interpretation. Freely available!

Extreme Value Analysis and Regional flood frequency analysis

- Hosking J.R.M. and Wallis, J.R. (1997): Regional frequency analysis: an approach based on L-moments. Cambridge University Press, Cambridge

Coles, S. (2001): An Introduction to Statistical Modeling of Extreme Values. Springer

Regression Analysis and Cluster Analysis

Julian J. Faraway (2002): Practical Regression and Anova using R. Freely available!

Kaufman and Rousseeuw (1990): Finding groups in data, New York, Wiley.

Time Series Analysis

Thomas, H.A. & Fiering, M.B. (1962): Mathematical synthesis of streamflow sequences for the analysis of river basins by simulation. In: Design of Water Resources Systems, (Ed. by A. Maas et al.) Chapter 12. Harvard University Press, Cambridge, Mass.

Box, G.E., Jenkins, G.M. and Reinsel, G.C. (1994): Time Series Analysis: Forecasting and Control (Forecasting & Control), Prentice Hall.