Marshall University

College of Science

MTH 422: Applied Time Series Analysis

Course catalog description

Finding statistical models to represent various time dependent phenomena and processes; coverage of a variety of forecasting techniques, with an emphasis on adaptive, regression, and Box-Jenkins procedures.

Credit hours

3 hours

Prerequisites

A grade of C or higher in MTH230

List of topics

- Fundamental Statistical Concepts
- Trend Analysis
- Models for Stationary Time Series
- Models for Non-Stationary Time Series
- Model Specification or Identification
- Parameter Estimation
- Model Diagnostics
- Forecasting
- Seasonal Models
- Time Series Regression Models
- Introduction to Spectral Analysis
- Estimating the Spectrum

Suggested textbooks

Time Series Analysis with Applications in R, 2nd edition, Cryer and Chen, Springer. ISBN 978-038-775958-6

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