

# Bemidji State University

## STAT 3610: Time Series Analysis

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: \*.\*

Lab Hours/Week: \*.\*

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

Linear time models, seasonal models, stationary models, moving average, autoregressive and ARIMA models, model identification, confidence intervals and testing, forecasting and error analysis.

Prerequisites: (MATH 2472 and STAT 2610) or STAT 3631. (Might not be offered every year)

**B. COURSE EFFECTIVE DATES:** 06/02/2008 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Graphical displays
2. Numerical descriptions
3. Transformations
4. General forecasting techniques
5. Regression analysis and forecasting
6. Confidence intervals and testing
7. Error analysis

### D. LEARNING OUTCOMES (General)

1. Recognize time series data from other types of data and categorize it as stationary or non-stationary
2. Determine fitting difference, first order, and second order models to time series data and using these models to make predictions
3. Use a statistical software package to model time series data and make predictions
4. Apply linear regression techniques to time series analyses

### E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

### G. SPECIAL INFORMATION

None noted