**Instructor:** Yaser Samadi (ysamadi@siu.edu, 618-453-6502)

**Office:** Neckers 281

**Office Hours:** M W F, 12:50pm - 1:50pm, 3:00pm - 4:00pm, or by appointment.

**Meeting Hours:** M W F, 11:00am - 11:50am, Neckers 410


**Prerequisite:** Math 480 or Math 483 with C or better.

**Course Objectives:** The main objective of this course is to expose you to various methods and tools available to build time series models for data arising in real life. The main emphasis will be on applications along with some exposure to the theoretical aspects of the methods. We will cover the following topics: Fundamental concepts; Stationary time series models known as ARMA models; Non-stationary time series models known as ARIMA models; Forecasting; Model Identification; Parameter Estimation, diagnostic checking and model selection; seasonal time series known as SARIMA models; and Intervention analysis models. If time permits, we will cover conditionally heteroscedastic time series models known as ARCH and GARCH models.

**Grades:** Grades will be based on the following scheme. Course grade will be assigned based on total points earned. Straight scale will be adopted to determine a +/- letter grade.

- Homework & project: 25%
- Quizzes: 15%
- Midterm Exams (3 exams, each 10%): 30%
- Final Exam: 30%

**Homework:** These will be assigned periodically, graded and returned.

**Exams:** Tentative Exam schedule is as follows: Exam 1- Friday, September 25th; Exam 2- Wednesday, October, 28th; Exam 3- Monday, November 23rd; and the Final exam will be on Monday, December 14th from 10:00am to 12:00 (the Room will be announced).

**Attendance:** I expect you to attend every class, to arrive on time, and to participate in all class activities. Good attendance will be taken into account in borderline cases.

**Notes:** The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.

Last day to drop with refund: Sunday, September 6; Last day to drop (Salukinet, no refund, resulting a W grade): Sunday, November 1.