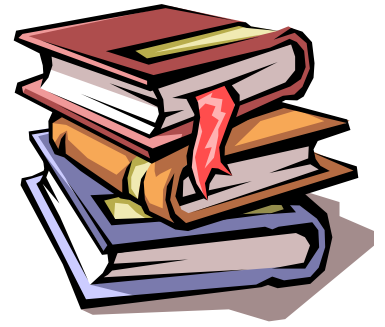


Course Outline: ACSC 418 001  
Winter 2011  
Tuesdays and Thursdays, 10:00-11:15 am LC211  
(Location may change)  
Exam Thursday April 14<sup>th</sup> 2011 9-12am



**Instructor** Peter Douglas, CW 307.24  
**Telephone:** 585-4346 (w), 525-8368 (h)  
**Email:** [douglas@math.uregina.ca](mailto:douglas@math.uregina.ca) (w), [lmurphy@accesscomm.ca](mailto:lmurphy@accesscomm.ca) (h)

**Office Hours** Mondays 9:30-11:00am  
Tuesdays and Thursday 1:30-3:00 pm  
Other times by appointment (note that I am off campus on Wednesdays and many Fridays)

**Text** *Econometric Models and Economic Forecasts*, (4<sup>th</sup> Edition) by Pindyck and Rubinfeld  
Other materials provided by the instructor.

**Other Materials** A class website will be maintained on URCourses  
This will hold copies of handouts, assignments, solution sets and other items of interest.

### Overview

This course will cover learning outcomes listed under Time Series and Forecasting for VEE in Applied Statistics on the Spring 2011 SOA Syllabus. These include the following topics:

- 1) Linear time series models;
- 2) Moving average, autoregressive and/or ARIMA models;
- 3) Estimation, data analysis and forecasting with time series models;
- 4) Forecast errors and confidence intervals; and
- 5) More complex models including ARCH, GARCH and Regime Switching Lognormal models;

In addition we will cover data sources, and the application on these models in economic, actuarial and other real life projections

## Course Requirements

- 1) An awareness of the U of R General Calendar.
- 2) Completion of class assignments (approximately 10-12). These should be legible, on 8.5\*11" paper and stapled together. Please ensure that you clearly identify your assignments with your name and student number.
  - a. Assignments are due at the start of class on the assigned date. No credit will be granted for late papers.
  - b. Students will need to use a computer package such as Microsoft Excel or SAS or similar statistical packages.
  - c. At least one assignment will involve a group presentation to the class. These may carry a higher weight than other assignments.
- 3) One midterm exam to be written in class time. This is tentatively scheduled for late early to mid-March.
- 4) One 3-hour final exam scheduled for 9-12 am on Thursday April 14, 2011 (location to be announced).
- 5) Alternate arrangements for midterm and final exam may be made at the discretion of the instructor for students who provide prior notice and adequate documentation. However, the instructor reserves the right to deny such arrangements for students who have not completed the course assignments to date.
- 6) For the midterm and final exams, students are required to bring photo ID and are advised to bring an approved Society of Actuaries calculator. Details on approved SOA calculators may be found in the reserve file or on the SOA website.
- 7) Note that statistical tables will be provided for the exams. A copy of these tables will be available on UR Courses prior to the end of term.

## Grading

Final grades will be based in on the average mark calculated as follows:

- i) Assignments 40%
- ii) Midterm 20%
- iii) Final Exam 40%

The instructor reserves the right to fail a student who does not pass the final exam.