

**COMMONWEALTH GRADUATE ENGINEERING PROGRAM
DISTANCE LEARNING COURSE PLANNING SHEET
UNIVERSITY OF VIRGINIA**

Course:
Semester:
Instructor:
Phone No.:
Office Address:

E-Mail Address:

Very important to get the following information asap so that off-grounds students and sites can order books:

Textbook(s): (Student to purchase)

Reference(s): Limit 4

Computer Needs:

Computer Capability:

Software required:
Provided?

Other:

Please attach a copy of your course syllabus, biographical sketch, and any other information we might need to prepare for this course.

**Course Syllabus
Time Series Analysis
SYS 730-1, Spring 2008**

Course

Lecture: TR 6:30 –7:45 pm, Thornton Hall, A119
Website: https://toolkit.itc.virginia.edu/cgi-local/tk/UVa_SEAS_2008_Spring_SYS730-1

Instructor: Ginger Davis

Office: 101C Olsson Hall
Phone: 434-924-1723
Email: gingerdavis@virginia.edu
Web Page: <http://www.sys.virginia.edu/gmdavis/>
Office Hours: Tuesdays 5 - 6 pm; Fridays 1 - 2 pm, and by appointment

Teaching Assistant:

Office:
Phone:
Email:
Office Hours:

Prerequisites: SYS 421, APMA 311 or 312, SYS 605.

Text: *Time Series Analysis and Its Applications With R Examples*
Series: Springer Texts in Statistics
Shumway, Robert H., Stoffer, David S.
2nd ed., 2006, XIII, 575 p. 160 illus., Hardcover
ISBN: 978-0-387-29317-2

Course Description

An introduction to time series analysis and forecasting. Topics include exploratory data analysis for time-correlated data, time series modeling, spectral analysis, filtering, and state-space models. Time series analysis in both the time domain and frequency domain will be covered. Concentration will be on data analysis with inclusion of important theory.

Homework

Homework will be assigned regularly. Late homework will not be accepted. You will be selected (at least once) to present your solution to a homework problem during class. This will factor into your class participation grade.

Exam

There will be a midterm examination given during class.

Project

Mid-way through the semester, you will select a research question of interest to you pertaining to some time series data. You will present to the class your research question along with a plan for how you will answer it. At the end of the semester, you will make a presentation to the class detailing your results and analysis.

Grading

| | |
|---------------------|-----|
| Homework | 30% |
| Exam | 30% |
| Project | 30% |
| Class participation | 10% |

Class outline

Chapter 1
Applications
Chapter 2
Applications

Chapter 3
Applications
Chapter 4
Applications
Midterm
Project Presentation 1
Chapter 5
Applications
Chapter 6
Applications
Chapter 7
Applications
Final Project Presentation

Software: R. You can download R for free at <http://www.r-project.org/>

The Honor System and the School of Engineering and Applied Science

The School of Engineering and Applied Science relies upon and cherishes its community of trust. We firmly endorse, uphold, and embrace the University's Honor principle that students will not lie, cheat, or steal, nor shall they tolerate those who do. We recognize that even one honor infraction can destroy an exemplary reputation that has taken years to build. Acting in a manner consistent with the principles of honor will benefit every member of the community both while enrolled in the Engineering School and in the future.

Working Together

You are allowed to work together on homework. However, when it comes time for you to write up the solutions, I expect you to do this on your own. Students with identical solutions will receive zero credit.

Absences

You are expected to attend every class. If you are not able to turn in a homework assignment, present your homework solution to the class, or take an exam because of an unexcused absence, you will receive zero credit. A university excuse from a scheduled class activity must be presented in writing no later than two weeks prior to the date of the absence.

Course Evaluation

Your input concerning the course is necessary for me to improve it. Therefore, you are required to complete the end-of-semester evaluation survey.