

STAT: 6560
Applied Time Series Analysis
3 SH
9:30-10:20 a.m.
Spring 2020
Stramer

Instructor: Osnat Stramer, 370 SH, phone: 335-3182,
Email: osnat-stramer@uiowa.edu

Office Hours: Scheduled office hours for the course are from 10:45 am to 12:15 pm on MF in 370 SH. Appointments at other times may be made via email, osnat-stramer@uiowa.edu. Students seeking out-of-class help from me are expected to have excellent attendance in the lecture.

DEO:
Prof. Kung-Sik Chan, 241 SH, 335-0712
kung-sik-chan@uiowa.edu

Course Website: <http://icon.uiowa.edu>

WEB: Be sure to check out the book's web page at
<http://www.stat.uiowa.edu/~kchan/TSA.htm>

Professor Chan has provided R scripts for everything in the book. Copying from them saves a lot of typing and you can learn a lot about R by looking through the code provided.

Text: “Time Series Analysis with Applications in R” By Jonathan Cryer and Kung-Sik Chan. 2nd edition (October 17, 2008), published by Springer Verlag.

<https://mybiostats.files.wordpress.com/2015/03/time-series-analysis-with-applications-in-r-cryer-and-chan.pdf>

Course Coverage: most of the material in Chapters 1-10. We may not have enough time to cover chapter 10.

Computer Package: We will mainly use R (GNU Splus) for statistical analysis. R will be available at the ITC in Schaefer Hall. R can be freely downloaded from <http://www.r-project.org/>. An R package called TSA has been specifically developed that implements almost all methods introduced in the book. **For help with R see Appendix in the textbook and some notes posted on icon under R.**

Notes: I will post notes on icon. However, the notes can only be used in addition to the textbook and attending classes. **They are not self-contained.**

Prerequisite: STAT:3101, and STAT:3200 or STAT:5200.

Grading System

Assignments (10%): Homework will be assigned **nearly** each Monday and due the next Monday.

Quizzes (15%): There will be 3-4 announced quizzes.

Mid Project (15 %): I will assign you a data set with instruction. The project is due on 3/30. (No homework will be due that week).

Midterm (20%): The midterm is on Tuesday March 3in 15 SH from 6:30-8:30 pm. You need to let me know by 2/3 if you have any reasonable conflict with the date.

Final project (20%): I will post directions in a different file under syllabus. The oral presentation is a part of the grade. The tentative dates for the presentations are 4/27, 4/29 in class and 4/28 in 60 SH from 6:30-8:00 pm. You need to submit your presentation before class on 4/24. You need to attend all presentations to get a full credit for the final project. Points will be deducted otherwise. The date for submitting the proposal is April 3. The final report is due on May 1.

Final (20%): TBA by the University.

Exams and quizzes are closed book and closed notes, except that you may use a “crib sheet”-one page (8.5 x 11) of notes written on one side for the quizzes, one pages of notes written on both sides for the midterm and two pages of notes written on both sides for the final.

I reserve the right to give bonus points at any time. The bonus points may be applied to any part of your grade.

Below is one standard set of letter grades and percent equivalencies that is often used. I will curve the grades up if necessary.

A+	A	A-	B+	B	B-	C+	C	C -	D+	D	D-	F
100-99	98-93	92-90	89-87	86-83	82-80	79-77	76-73	72-70	69-67	66-63	62-60	59 or below

*No make-up exams will be given unless there is an absence due to unavoidable circumstances as stated by University policy.

Resources:

For an excellent reference book, R codes, and a library astsa go to <https://www.stat.pitt.edu/stoffer/tsda/> The R package astsa will be useful for us, especially to overcome some bugs in the package TSA.

The Writing Center service offers tutoring, appointments, and online tutoring. Please see <https://writingcenter.uiowa.edu/>

Course Policies: see <https://clas.uiowa.edu/faculty/teaching-policies-resources-syllabus-insert>

Course attendance: Students are responsible for all material covered in the lectures. **It is essential that you attend all** classes though I will not take attendance.

Electronic Communication: University policy specifies that students are responsible for all official correspondences sent to their University of Iowa e-mail address (@uiowa.edu). Faculty and students should use this account for correspondences ([Operations Manual, III.15.2](#), k.11).

Accommodations for Disabilities: The University of Iowa is committed to providing an educational experience that is accessible to all students. A student may request academic accommodations for a disability (which includes but is not limited to mental health, attention, learning, vision, and physical or health-related conditions). A student seeking academic accommodations should first register with Student Disability Services and then meet with the course instructor privately in the instructor's office to make particular arrangements. Reasonable accommodations are established through an interactive process between the student, instructor, and SDS. See <https://sds.studentlife.uiowa.edu/> for information.

Academic Honesty: All CLAS students or students taking classes offered by CLAS have, in essence, agreed to the College's [Code of Academic Honesty](#): "I pledge to do my own academic work and to excel to the best of my abilities, upholding the [IOWA Challenge](#). I promise not to lie about my academic work, to cheat, or to steal the words or ideas of others; nor will I help fellow students to violate the Code of Academic Honesty." Any student committing academic misconduct is reported to the College and placed on disciplinary probation or may be suspended or expelled ([CLAS Academic Policies Handbook](#)).

CLAS Final Examination Policies: The final examination schedule for each class is announced by the Registrar generally by the fifth week of classes. Final exams are offered only during the official final examination period. **No exams of any kind are allowed during the last week of classes.** All students should plan on being at the UI through the final examination period. Once the Registrar has announced the date, time, and location of each final exam, the complete schedule will be published on the Registrar's web site and will be shared with instructors and students. It is the student's responsibility to know the date, time, and place of a final exam.

Making a Suggestion or a Complaint: Students with a suggestion or complaint should first visit with the instructor (and the course supervisor), and then with the departmental DEO. Complaints must be made within six months of the incident (CLAS [Academic Policies Handbook](#)).

Understanding Sexual Harassment: Sexual harassment subverts the mission of the University and threatens the well-being of students, faculty, and staff. All members of the UI community have a responsibility to uphold this mission and to contribute to a safe environment that enhances learning. Incidents of sexual harassment should be reported immediately. See the UI [Office of the Sexual Misconduct Response Coordinator](#) for assistance, definitions, and the full University policy.

Reacting Safely to Severe Weather: In severe weather, class members should seek appropriate shelter immediately, leaving the classroom if necessary. The class will continue if possible when the event is over. For more information on Hawk Alert and the siren warning system, visit the [Department of Public Safety website](#).