

STAT 388 – Independent Study in Time Series
Course Project and Paper
(worth 25% of final grade)

Purpose – This project is intended to demonstrate to students the widespread use and applicability of statistical time series methods in practice in the context of scientific research. Students are to read and critique one research paper that uses *statistical techniques related to time series analysis*.

The Assignment – Students are to focus on any themes of interest and to obtain **one (1)** research paper in any chosen field. Note that many interesting research articles can be obtained via the Web – either through Loyola’s Library e-Journals or from the Archives pages of most journals themselves.

Your Paper – Your objective is to *outline, discuss and critique the statistical methods used* in your chosen research article; your paper should give the larger picture of the specific field of study as well as a detailed discussion and critique of the statistical techniques used in the research article you have chosen. All assumptions and hypotheses used in the articles must be clearly stated in your analysis (even if the articles make no mention of these), and you are to do outside reading and work in mastering the time series methods used in your article. Your paper might include sections titled “Introduction” or “Background”, “Statistical Time Series Methods Employed”, “Critique of Statistical Time Series Methods”, and “Conclusion.” It may help you to imagine that your audience is a classmate who has completed this course.

Important Milestones – here is the timeline:

- On or before **Thursday 9th April**: Dr. O'Brien must have approved the use of each student’s chosen article – thus, each student is requested to see Dr. O'Brien before 12noon so he can look through your article to verify that the articles meet the criteria for this project.
- On or before **Tuesday May 5th**: papers are due by noon delivered to Dr. O'Brien; email submissions will not be accepted.

What to turn in – Students must do their own work for this project, meet the milestones given above, and must turn in a 4-7 page typed double-spaced paper by Friday, 1st May 2009 by 12noon. Student’s grades for this Project/Paper will reflect the quality of the paper you have written including the underlying analysis and critique (and understanding, mastery and explanation of the time series methods used in the article); points will be deducted if you miss any of the above milestones.

Please attach a spare copy of your chosen research article with your paper (as it will not be returned to you) so as to facilitate subsequent grading.