

PSCI 4307: Predicting Politics

Course Information

PSCI 4307

Section 4396-001 Spring 2015

MW 1:00-2:15pm, GR 3.402A + Others

Contact Information

Prof. Patrick T. Brandt

E-mail: pbrandt@utdallas.edu

Office: Green 2.802

Hours: Monday 12:00-1:00pm, Wednesday 12:00-1:00pm and 2:30-4:00pm, and by appointment

Phone: 972 883 4923

Course Description

This course is designed to teach you about how social scientists understand and predict political events. We will examine how decision theory and statistical models are used to predict and explain events like riots, civil wars, intra- and inter-state conflict, terrorism, and elections, etc. We will do this by focusing on forecasts of a) regional conflicts such as the Levant (Israel-Palestine-Lebanon), the Indian subcontinent (India-Pakistan), and China (China-Taiwan), b) elections, c) terrorism, and d) elections.

Why do we want to do this? There is a growing need in the policy, human rights, and foreign policy communities for these types of forecasts. They are used for early warning systems, humanitarian aid allocation, human rights monitoring, foreign policy decision-making, and conflict mediation. Election forecasts are important for similar reasons: they help manage expectations about public policy, taxes, and other political outcomes.

This course is technical. This is because it covers both cutting edge methods employed in the social sciences and statistics. I assume no knowledge of statistics beyond EPPS 3405 for this course. *The rest I will teach you.* But you should read, not skip the statistics related material in the articles and materials that you read for this class. I will also lead short tutorials on how to use software to do statistical analysis and forecasting for the kinds of events and political data that we will discuss. This will include replications and extensions of previous predictive models and the development of new ones.

Student Learning Objectives

On completing this course, students will be able to:

- understand and apply commonly used prediction methods to political events;
- discuss and analyze the merits and drawback of commonly used prediction and forecasting methods;
- conduct forecasting and analysis exercises using accepted techniques and validate the forecasts.
- research, write and revise a research paper about political events based on empirical data and current social science theories.

Required texts and materials

The following books have been ordered for this course:

Fair, Ray. 2011. *Predicting Presidential Elections and Other Things*. Stanford Economics and Finance.
Tetlock, Philip E. 2005 *Expert Political Judgement*. Princeton University Press.

These texts are available at the UTD bookstore, Off-Campus Books, as e-books, etc.

You will also be asked to read a wide variety of scholarly research articles, websites and other material related to the topic. These are listed by date in the course calendar below. You will be required to find these via the UTD library or I will provide them (if they are working papers or things that are not easily found on the web).

Required readings will be approximately 100 pages per week. You should read carefully the material at least once before class.

Students should also stay abreast of current political events. Current events will figure prominently in class discussions, assignments, as well as examples. I recommend making a habit of reading a daily paper such as the New York Times, LA Times, Washington Post, or the Chicago Tribune. Alternatively you may also wish to read a weekly news magazine such as The Economist, Newsweek, Time, or U.S. News and World Report.

Grading and Course Policies

Grading

There are **FIVE** major graded components to this course. The majority of them are centered around the course paper at the culmination of the course.

- **Course memos** (25% of final grade). These are due on the days you agree to do them (see below).
- **Prediction Exercises** (30% of final grade). These will be forecasts that you will generate based on in-class sessions. Your grade will depend on your explanation and write-up of the forecasts.
- **Interim paper components** (20% of final grade). Due variously from February 25, 2015 through April 1, 2015.
- **Final individual paper** (20% of final grade). Due April 29, 2015.
- **Class participation** (5% of final grade).

There is no extra credit available in this course. Note the grading criteria and plan accordingly for your success.

Grades are based on the standard grading scale: A = 100-90, B = 89-80, C = 79-70, etc., with pluses / minuses at my discretion.

If you have any questions about your grade on an assignment, please wait until 24 hours after receiving your assignment before discussing the grade with the professor. There are no exceptions to this policy.

If you wish to have an assignment re-graded, it must be returned to me within two days of the day it was returned (if I am not available that day, ask the staff of the School of Economic, Political and Policy Sciences to leave it in my box). Assignments to be re-graded must include a memo stating the reason why you believe they assignment should be re-graded. Finally, re-graded assignments can be graded higher, lower, or the same as the initial grade.

Course Memos

Each student will write **4** course memos during the course. Memos should be 5 pages double spaced, in 12pt font. Memos should have three main themes or sections: 1) a summary of the material, 2) a criticism or critical commentary on what is correct or incorrect about the readings and 3) a set of questions for class discussion about the readings. You will be able to select the reading / class when you will write these. I will distribute a list and limit how many of you can write memos for each session so that they are evenly distributed over the term.

The purpose of the class memos is that they serve as 1) the basis for class discussion and 2) that they ensure someone other than the instructor has read the material closely (everyone should read the material!)

Course memos are due by 5pm the day before the class session they will cover. Please submit them to me via e-mail at pbrandt@utdallas.edu. I may circulate relevant parts of the memo to the class as appropriate.

Interim Paper Components

Before writing your course paper there will be several interim deadlines. At each of these deadlines you must submit a component that will be part of your final grade in the course:

Initial Meeting and Topic Page (2.5% of final grade) The first step in writing the term paper is to schedule an appointment with the instructor to review your paper topic. Before beginning your paper, you are **REQUIRED** to come and talk with me about your paper. At or prior to this meeting, please provide a ONE PAGE research proposal or outline that lays out the following for your paper:

- Main research question you are addressing.
- Hypothesis (or Hypotheses) you wish to evaluate in your paper.
- Data and variables to be used in the analysis.
- Tests and methods that will be used to evaluate the hypotheses.
- Tentative listing of the techniques and models you may use.

You should schedule your meeting with me prior to the 6th week of class, so before February 18, 2015. Don't worry about finding data or how it will be analyzed. I can help with that.

This meeting and topic page must be completed before February 18, 2015. You will need to submit the topic page to me before the meeting. Note also that I will be traveling for conferences before or shortly after February 11 and 18, so you will need to work this into my office hours or make other appointments.

Research and plagiarism tutorial (2.5% of final grade) This is due by February 25, 2015. This will be distributed later in the course.

Annotated bibliography (5% of final grade) This should be a review of the literature search you have done for your paper. Details will be forthcoming later, but it will require you to do primary and scholarly research in a process like the research tutorial. This component is due via e-mail before March 25, 2015.

Rough draft of the paper (10% of final grade) This is a rough draft of your paper. It does not need to be complete, but it should be enough for me to comment on what you are doing and offer feedback on your writing. I would expect that this will be about 80% of your final paper. Due April 13, 2015, in class.

Final Individual Papers

Each student will write one term paper. The papers should be 10-15 pages long, double-spaced, 12 pt font, and must be original research (the chance you will be able to "reuse" something should be probability zero.)

Paper topics must be discussed with the instructor in advance of writing the paper. Topics can include, but are not limited to

- Forecasting methods or comparisons for political and social data.
- Conflict forecasts for some of the regions we will cover in this class.
- Analysis of counterfactual, "what if", or *ex post* forecasts of past events.
- Analysis of omnibus forecasts such as those that are done of civil wars, failed states, regional conflict, etc.
- Any other related topic you can convince me would make a good term paper about political prediction.

Class Participation

This is a small course, by design. The goal is for this course to be organized as a high participation research seminar that is focused on exploring and understanding how political events can be forecast. So everyone's active participation is a must. As such, I will count course participation — discussion, comments, questions, etc. toward your final grade. Note that this is not a "optional" or "extra" — if you fail to participate in the class sessions your final grade will suffer.

Late assignments

Late assignments will be penalized. Late memos will lose 5 points per day. Late papers and other components will lose 10 points per day. Assignments submitted via email or eLearning will be dated as received in my inbox or in the on-line course system.

ELearning

eLearning is used in this class for the distribution of data, website links, readings, presentations, etc. You can access the course eLearning page at <http://elearning.utdallas.edu>. Additional information about how to use eLearning is available at this site as well. You will need a UTD net-id to access this site.

eLearning is also how I will communicate with you and administer any class groups. eLearning also includes various discussion tools and interactive elements that I will use as part of the course. You are responsible for announcements made through eLearning. You may forward messages from eLearning to your regular e-mail account. Please select a forwarding address in your mail preferences if you do not regularly check your eLearning mail or UTD email. *My preference on a class this small is to deal with email outside of eLearning.*

Attendance

Class attendance is required. I will randomly take attendance throughout the term. You are responsible for any announcements made or information given during class. I may provide copies of lecture notes or slides at my discretion. However these are only an outline of the material, so your attendance is very important if you are to master the material.

Course conduct and expectations

The following rules apply in class:

1. Turn off your cell phone. It is VERY distracting to others. "Off" means that it does not ring OR vibrate. (Exceptions to this policy can be made, come to talk to me.)
2. Do not fall asleep. It is rude and distracting. Bring coffee if you need it (I do.)
3. Be polite and courteous to your fellow students.
4. Raise your hand when you want to be recognized to answer or ask a question. If you do not raise your hand I will not recognize you or your answer.
5. You are responsible for things: therefore if you miss something I announced or fail to complete an assignment, my response will be "How is this my problem?"
6. Note that this syllabus is not a contract. It is subject to change at my discretion. While we may be studying the political science, this class is not a democracy.
7. Class starts at 1:00pm, not 1:15pm. Be here on time.
8. Respect my time and I will respect yours. We are both busy.
9. Grade disputes must follow university policies about how to contest a grade. If you contact me to contest a grade I will immediately refer you to the University policy and will follow it to the letter.
10. Problems with *eLearning* are not my problem. You need to note 1) the outages schedule and 2) when assignments are due. If you start an assignment and do not complete it before it is due, then it is your problem, not mine.
11. *You are expected to be pro-active in anticipating and planning for any absences or problems you will have in completing course work.* Make arrangements for possibly missed work prior to the due date is preferable and more likely to be successful than doing it after the due date. In the end: "A failure to plan on your part does not constitute a crisis for me." Plan for absences and missed work accordingly.

Course Calendar

The dates listed for each topic are approximate and will depend on how quickly we move through material. You should read the material for each date *before* class. Also note that you will need to check eLearning periodically for updates, announcements, etc. Readings are listed under the lecture topics below.

12 January: Introduction

- Go over the syllabus
- Get started by looking at some work and websites on political forecasting.
- Talk about what we will do in this class.

14 January: Real time forecasting motivations

- Brandt, Freeman, Schrodtt 2011. “Real Time, Time Series Forecasting of Inter- and Intra-State Political Conflict” *Conflict Management and Peace Science* 28(1): 41–64. http://www.utdallas.edu/~pbrandt/Patrick_Brandts_Website/Research_files/03-CMP388125.pdf
- Pressure and Mystery, on the Rise: Predicting Volcanoes’ Activity Is Tricky, and for Iceland, Nerve-Racking <http://nyti.ms/1BC48r4> *New York Times* January 5, 2015.
- Check out the following sites:
 - KEDS / TABARI: <http://eventdata.parusanalytics.com/>
 - International Crisis Group: <http://www.crisisgroup.org>
 - Swisspeace / FAST: <http://www.swisspeace.org>
 - Forecasting Principles: <http://www.forecastingprinciples.com>
 - Stratfor: <http://www.stratfor.com>
 - Political Instability Task Force: <http://globalpolicy.gmu.edu>
 - Center for Systemic Peace <http://www.systemicpeace.org>
 - Political Risk Services Group: <http://www.prsgroup.com>
 - Votamatic <http://votamatic.org>
 - 538 blog <http://www.fivethirtyeight.com> and <http://fivethirtyeight.blogs.nytimes.com>

19 January: No class; MLK day

21 January: Overview of forecast methods I

- Armstrong, J. Scott. 2001. “Introduction” in *Principles of Forecasting: A Handbook for Researchers and Practitioners*. J. Scott Armstrong, ed., New York: Springer
- Skim Chapter 4 on “Expert Opinions”, pp. 57-144 in *Principles of Forecasting: A Handbook for Researchers and Practitioners*. J. Scott Armstrong, ed., New York: Springer

26 January: Overview of forecast methods II

- Armstrong, J. Scott. 2001. “Selecting Forecasting Methods”, Chapter 12 in *Principles of Forecasting: A Handbook for Researchers and Practitioners*. J. Scott Armstrong, ed., New York: Springer. pp. 301–362.
- Collopy, Fred, Monica Adya and J. Scott Armstrong. 2001. “Expert Systems for Forecasting”, Chapter 10 in *Principles of Forecasting: A Handbook for Researchers and Practitioners*. J. Scott Armstrong, ed., New York: Springer. pp. 283–300.

28 January: Predicting discrete events

- Bueno de Mesquita, Bruce. “A Decision Making Model: Its Structure and Form” *International Interactions* 23: 235-66, 1997.

- Bueno de Mesquita, Bruce. 2009. "A New Model for Predicting Policy Choices: Preliminary Tests". *Conflict Management and Peace Science* 28: 65–87.

2 February: Forecast uncertainty

- Chatfield, Chris. 2001. "Prediction Intervals for Time-Series Forecasting," in *Principles of Forecasting: A Handbook for Researchers and Practicioners*. J. Scott Armstrong, ed., New York: Springer. pp. 473–494.
- Brandt, Patrick T., John R. Freeman, and Phillip A. Schrodt. 2014. "Evaluating Forecasts of Political Conflict Dynamics". *International Journal of Forecasting*. 30: 944–962. An earlier version is at <http://polmeth.wustl.edu/mediaDetail.php?docId=1285> and in eLearning.

4 February: Examples of Quantitative Forecasting

- Look at the forecasting papers on the Parus event data site: <http://eventdata.parusanalytics.com/>
- Brandt, Patrick T., Michael P. Colaresi and John R. Freeman. 2008. "The Dynamics of Reciprocity, Accountability and Credibility." *Journal of Conflict Resolution*. 52(3): 343-374.
- Brandt, Patrick T. and John R. Freeman. 2006. "Advances in Bayesian Time Series Modeling and the Study of Politics: Theory Testing, Forecasting, and Policy Analysis." *Political Analysis*. 14(1):1–36.

9 February: Predicting Elections

- Fair, Chapters 1–4.

11 February: Research and Plagiarism Tutorial

- There are no readings for this date. We will review how to do research on your topic and how to avoid plagiarism in your writing.

16 February: Predicting Human Behavior

- Fair, Chapters 5–8

18 February: Predicting Sports and Economics

- Fair, Chapters 9–12
- Initial topic meeting must be completed by this date.

23 February: Prediction Exercise I

- In class session to generate predictions based on what we have done so far.

25 February: Forecast evaluation and opinion evaluation I

- Tetlock, Chapters 1-3
- Research and plagiarism tutorial is due on this date. Any received after 5pm on this date will be considered late.

2 March: Forecast evaluation and opinion evaluation II

- Tetlock, Chapters 4-5

4 March: Forecast evaluation and opinion evaluation III

- Tetlock, Chapters 6-8

9 and 11 March: No class, Spring Break

16 March: Getting data for your own forecasting methods

- I will lecture on this date. We will do an interactive session on how to find data for your forecasting questions.

18 March: Prediction Exercise II

- In this class session I will cover how to generate simple forecasts for some of the kinds of events and outcomes we have discussed.

23 March: Definitions of conflict measures and data

- Sambanis, Nicholas 2004. "What is Civil War?" *Journal of Conflict Resolution* 48(6): 814–858.
- Schrodtt, Philip A. 1994. "The Statistical Characteristics of Event Data". *International Interactions* 20(1-2): 35-53
<http://eventdata.parusanalytics.com/papers.dir/ISA.88.pdf>
- KEDS / CAMEO codebooks: <http://eventdata.parusanalytics.com/data.dir/cameo.html>
and <http://eventdata.parusanalytics.com/data.dir/weis.html>
- Shellman, Steven. 2004. "Measuring the Intensity of Intrnational Political Events Data: Two Interval-Like Scales". *International Interactions* 30(2): 109–141.
- Shellman, Steven. 2004. "Time series intervals and statistical inference: The effects of temporal aggregation on event data analysis". *Political Analysis* 12(1): 97-104.
- Political Instability Task Force codebook and data: <http://globalpolicy.gmu.edu/pitf/pitfcode.htm>
- EUGene and MARGene: <http://www.personal.psu.edu/dsb10/software.htm>
- Penn World Tables <http://pwt.econ.upenn.edu/>
- U.N. Millenium Development data and goals: <http://www.un.org/millenniumgoals/>

25 March: Forecasting civil wars

- Elbadawi, I. and Sambanis, N. 2002. "How much war will we see?: Explaining the prevalence of civil war" *Journal of Conflict Resolution*. 46(3): 307–334.
- Fearon, James D. and David D. Laitin, 2003. "Ethnicity, Insurgency, and Civil War" *American Political Science Review* 97(1):75–90.
- Collier, Paul and Anke Hoeffler, 2004. "Greed and grievance in civil war" *Oxford Economic Papers* 56(4): 563–595
- Ward, M. and B. Greenhill and K. Bakke. 2010. "The perils of policy by p-value: Predicting civil conflicts." *Journal of Peace Research* 47(4): 363–375.
- Brandt, Patrick T., T. David Mason, Mehmet Gurses, Nicolai Petrovsky and Dasha Radin. 2008. "When and How the Fighting Stops: Explaining the Duration and Outcome of Civil Wars." *Defence and Peace Economics*. 19(6):415–434.
- Annotated bibliographies are due.

30 March: Prediction Exercise II

- In class session to generate predictions based on what we have done so far. This will focus on civil war prediction.

1 April: Forecasting terrorism

- Enders, W. and Sandler, T. 2005. "After 9/11: Is it all different now?" *Journal of Conflict Resolution*. 49(2): 259–277.
- Enders, W. and Sandler, T. 2005. "Transnational Terrorism 1968-2000: Thresholds, Persistence, and Forecasts." *Southern Economic Journal*. 71(3):467–483.
- Brandt, Patrick T. and Todd Sandler. "What Do Transnational Terrorists Target? Has it Changed? And Are We Safer?" *Journal of Conflict Resolution* 54(2): 214–236.

6 April: Forecasting failed states / instability / peacekeeping

- King, Gary and Langche Zeng. 2007. "When Can History be Our Guide? The Pitfalls of Counterfactual Inference" *International Studies Quarterly* 51: 183–210. <http://gking.harvard.edu/files/counterf.pdf>
- Schrodtt, Philip A. 2007. "Of Dinosaurs and Barbecue Sauce: A Comment on King and Zeng." *International Studies Quarterly* 51(1):211-215.
- Sambanis, Nicholas; Doyle, Michael W. 2007. "No Easy Choices: Estimating the Effects of United Nations Peace-keeping (Response to King and Zeng). *International Studies Quarterly* 51(1): 217–226.
- Morrow, James D. 2007. "Officers King and Zeng and the Case of the Unsupported Counterfactual." *International Studies Quarterly*. 51(1): 227–229.
- King, Gary; Zeng, Langche. 2007. "Detecting Model Dependence in Statistical Inference: A Response" *International Studies Quarterly* 51(1): 231–241.

8 April: Prediction Exercise III

- In class session to generate predictions based on what we have done so far. This will focus on political instability and violence prediction.

13 and 15 April: Class session on forecasting papers and data

- These will be interactive sessions where I will work with you in class to develop your forecasting models.
- Rough drafts are due on April 13, 2015.

20 April: Election Forecasting Check out some election and poll sites (more will be provided later or you can Google for them):

- Gelman, A. and G. King. 1993. "Why are American presidential election campaign polls so variable when votes are so predictable?" *British Journal of Political Science* 23(4): 409–451.
- Linzer, D. A. (2013). Dynamic Bayesian Forecasting of Presidential Elections in the States. *Journal of the American Statistical Association*, 108(501), 124-134. http://amstat.tandfonline.com/doi/abs/10.1080/01621459.2012.737735#.VK3exGTF_dg
- Pollyvote, pollyvote.forecastingprinciples.com
- Helmut Norpoth's Primary Model, primarymodel.com
- Ray Fair's model: fairmodel.econ.yale.edu

22 April: Election Forecasting (Midterm elections)

- See the symposium on U.S. congressional election forecasting in *PS: Political Science and Politics*, 43(4): 625–648.
- Grofman, B., Brunell, T. L., and Koetzle, W. (1998). Why gain in the Senate but midterm loss in the House? Evidence from a natural experiment. *Legislative Studies Quarterly*, 79-89. <http://www.jstor.org/stable/440215>

27 and 29 April: In class work sessions to work on forecasting models for your papers

1 May: Papers Due by 4pm in GR 2.802

These descriptions and timelines are subject to change at the discretion of the Professor. This syllabus is also governed by University policies. See <http://go.utdallas.edu/syllabus-policies>.