1 Instructor Information

Professor Michael Findley
Phone: 801.422.5317
Email: mikefindley@byu.edu
Office: 734 SWKT
Office Hours: T/Th: 9–10 (or by appt)
Class Location: 337 SWKT

2 Teaching Assistants

The TA office is located in 174 SWKT and the meeting area for TA consultations is right outside in 173 SWKT. The names and contact information for each TA are listed below.

1. Jacob Rogers, S1, e: aggiefootball63@yahoo.com, T 9–11; Th 10–11
2. David Ellis, S2, e: davidandrew87@gmail.com, T 8–9, 12–1; Th 8–9
3. Megan Spencer, S3, e: meganspencer3@gmail.com, W 3–6
4. Dano Gunderson, S4, e: dano.gunderson@gmail.com, M 1–2; W 9–10, 1–2
5. Kaylie Clark, S5, e: kay.clark248@yahoo.com, MW 10–11; Th 4:30–5:30
6. Zachary Barrus, S6, e: zachary.barrus@gmail.com, M 8–10; T 4:30–5:30

Office hours listed by day/time

- M: 8–11; 1–2
- T: 8–11; 12–1; 4:30–5:30
- W: 9–11; 1–2; 3–6
- Th: 8–9; 10–11; 4:30–5:30

3 Course Overview and Objectives

Political Science 328 is a required course of all political science majors designed to be taken soon after PLSC 200. The course serves several purposes. Most importantly, it should help you learn to analyze political and social behavior analytically, with an emphasis on developing statistical skills. The course emphasizes regression analysis and covers a wide variety of regression techniques. My primary goal is to help you learn how to read and interpret statistical evidence as well as produce your own rigorous statistical arguments that you explain carefully and clearly.
This course will be structured very similar to Professor Goodliffe’s and Professor Pope’s 328 courses. We will use the same textbook, cover a similar set of topics, and have assignments and exams similar in length and general content. The Tuesday and Thursday classes will be conducted as lectures, primarily, but I strongly encourage you to ask questions and make comments germane to our discussion. Each of you should attend your assigned lab section each week. At the labs, you will learn new material such as how to use Stata, review material from lecture, discuss homework assignments, and receive instruction on upcoming assignments. I am happy to meet with students and encourage you to visit both the teaching assistants and me during office hours.

The political science department has developed a set of learning objectives here: [https://learningoutcomes.byu.edu](https://learningoutcomes.byu.edu) Further, because 328 fulfills GE requirements, please note that you can find the associated GE learning outcomes on this site as well. While I hope that this course can contribute to most or all of the learning outcomes, the course is designed to help you be intellectually enlarged by using appropriate methods of analysis and research, writing research papers, communicating effectively, and thinking critically and analytically. You should also exercise honesty and integrity as you carry out your work on the various assignments and exams. Finally, the course should contribute to your preparation for graduate school, as you embark on a career, or as you serve in other ways after you leave BYU.

Many of you are coming to this class with little or no quantitative background, besides the material you learned in PLSC 200, which is a prerequisite. That’s okay. This course will be very challenging, but by no means impossible. Those with previous experience in a calculus class or introductory class in the statistics department will find the material somewhat easier, but still challenging. Wherever necessary, we will wade into some of the associated math, but generally our emphasis will be on the application of statistical principles to social science questions. To master the material, you will need to devote a substantial amount of work on a sustained basis throughout the entire semester. Please take care to plan your course and work schedule so that you can devote enough time to this course. I cannot overstate how important it is that you devote substantial time to this course so that you can do well. You are primarily responsible for your performance in the class, but please note that the teaching assistants and I are eager to help you learn the material well. If you are confused, concerned, or otherwise in need of any help, please talk to us as soon as possible. I want each student to succeed and we will do everything we can to help make that happen.

4 Requirements

4.1 Assignment of Grades

The approximate grade breakdown is as follows:

- Weekly Assignments: 40% (200 points for 10 assignments)
- Research Project: 20% (100 points; breakdown is below)
• Midterm Exam: 15% (75 points)

• Final Exam: 25% (125 points)

The course is graded on a modified curve that we will discuss in greater detail later in the course. The basic idea, for now, is that I will look for natural breaks between students and assign grades accordingly. Thus, I do not assign the same number of A’s, B’s, and C’s. When assigning the final grades, I will use the higher of two grades:

1. Your complete point total for all assignments, the exams, and the research project

2. Your point total considering only the final research project and the final exam.

In order to use the second option, you must turn in at least 8 of the 10 weekly assignments (assignment 0 excluded) and the midterm exam. If you choose the second option, you still need to do all of the assignments as you will need them to be able to do well on the exams. I allow this possibility so that students who take longer to grasp the material can still do well in the class.

### 4.2 Required Readings

The following book is required for purchase. From time to time, I might post additional readings on blackboard. I will notify you in advance about any additional readings.


I recommend that you consult other texts when you have difficulties with the lecture material or Stock and Watson. One of the most helpful strategies for understanding the material is to read different treatments of the material. Some texts that you might find useful include:


4.3 Weekly Assignments

Each week you will be required to complete assignments that will include a variety of activities ranging from statistical theory problems to analyzing data and interpreting statistical results. Generally, weekly assignments will be posted on Blackboard every Friday. And the homework assignments will be due the following Friday by 10 am in the drop box outside of the political science office. If the assignment is not complete by then, I will not accept it. Do not ask for exceptions. You must type up your answers to each of the assignments in a clear and legible memo format. You must be honest in all of your work. All problem sets are required, but if you submit assignment 0 (in the first week) your lowest score will be replaced with a 20. Should you go this route, be very careful about which problem set you drop.

You will need to turn in your assignments with precise identification information. Most importantly, pay attention to the instructions at the beginning of each assignment. Your name, PLSC 328, instructor name, course section, lab instructor name, and assignment # should clearly be indicated at the top of each document. For example:

- Your name
- Political Science 328
- Instructor: Michael Findley
- Your section (1, 2, 3, ....)
- Lab instructor: Barrus, Ellis, Spencer, Etc
- Assignment #
- Answers here...

I strongly encourage you to work together on the problem sets. I also encourage you to visit the teaching assistants during their office hours for help. But the final work on each assignment must be your own original work. At the end of each assignment, you are required to disclose how you arrived at the solution to each problem. Under no circumstances should you copy anything from any other student’s assignment or exam.

In general, you are allowed to work through problems together, through informal discussions or working through the problems themselves, but you must write up your answers separately. You should not look at another student’s assignment as you are typing yours, you should not copy/paste and then change words, etc. You are not allowed to work from students’ assignments from previous or current semesters; nor are you allowed to work from an answer key. I’ve noted a few specific prohibited practices, but they illustrate the general principle: do not cheat. Do not do it blatantly. Do not try to find the gray area. Do not try to find what you may perceive as loopholes. I expect you to find ways to be clearly “in the right” and operate there.

If one of your weekly assignment’s appears too similar to another student’s I will simply assign a 0 the first time. If it happens repeatedly, I will consider this plagiarism
and will pursue appropriate measures to deal with it. In particular, plagiarism will result in a failing grade for the course, I will refer all cases to the honor code office, and all other appropriate measures will be taken. In any case, you must disclose honestly how you arrived at each solution in the assignments. Any instance of cheating on an exam will not only result in a 0, but will immediately be pursued with the honor code office, and be punished with a failing grade for the course, even if it is the first instance. Likewise, the research project should be entirely your own work.

4.4 Midterm and Final Exams

There is a midterm and a final, both of which are take-home exams. While the content of these exams is similar to the weekly assignments, you are not allowed to work together with any other students or individuals in any way. In case the previous sentence was unclear: you are not allowed to work together with any other students or individuals in any way. The final exam is comprehensive. Like the weekly assignments, you are required to disclose how you arrived at the solution to each problem.

4.5 Research Project

One of the primary purposes of this course is to teach you how to consume and produce statistical arguments. As part of this, you will be required to complete a research project in which you find, analyze, and interpret data. You may choose any political science topic, but you need to clear it with the instructor before carrying out the project. You need to obtain a social science data set with a continuous dependent variable and at least two independent variables.

The timeline for the final research project is as follows:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Date Due</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Proposal</td>
<td>Jan 27</td>
<td>10 points</td>
</tr>
<tr>
<td>Data Summary</td>
<td>Feb 17</td>
<td>10 points</td>
</tr>
<tr>
<td>Outline</td>
<td>Mar 9</td>
<td>10 points</td>
</tr>
<tr>
<td>Rough Draft</td>
<td>Mar 23</td>
<td>10 points</td>
</tr>
<tr>
<td>Final Draft</td>
<td>Apr 10</td>
<td>60 points</td>
</tr>
</tbody>
</table>

**Project Proposal:** You need to turn in a one-page, double-spaced proposal (standard font and margins) that states a research question, explains a potential causal connection linking an independent and dependent variable, offers at least 4 relevant citations, and discusses possible data sources to be used.

**Data Summary:** You need to turn in a one-page, double-spaced document (standard font and margins) that offers details about the data set that you plan to use. The summary should include summary statistics and any relevant figures that help describe the
data.

**Outline:** Your outline should be a combination of initial results displayed in tables and figures, including model diagnostics, along with some bullet points interpreting your results.

**Rough Draft:** The rough draft is the first cut at a full paper in which you briefly describe the research question, the literature, the data analysis (emphasizing interpretation of the results), and a conclusion. The text of the rough draft should be no longer than 5 pages (standard font and margins) and the title, tables, and figures can be extra.

**Final Draft:** The final draft is a revision of the rough draft in which significant editing strengthens the prose and discussion. The length and page guidelines are the same as the rough draft.

## 5 Course Policies

### 5.1 Resources

The syllabus, all grades, weekly assignments, some lecture outlines, and more will be posted on blackboard, which is accessible through the BYU homepage (blackboard.byu.edu). Most of the statistical work for the class will be conducted using Stata. The computers in the SWKT lab have Stata or if you prefer to purchase a copy that you can use off-campus, you can do so here: [http://www.stata.com/order/new/edu/gradplans/gpcampus.html](http://www.stata.com/order/new/edu/gradplans/gpcampus.html). If you purchase your own copy, you need to be sure to purchase Stata/IC or Stata/SE, because they support data sets with more than 1000 observations. Do not buy “Small Stata” as it is not useful for our purposes.

### 5.2 Lecture and Lab

Although it is standard to tell students they need to be in class, it is especially important in PLSC 328. This applies both to the lecture and the lab. Falling behind in this class can have grave consequences. If you need to miss for an extended period, for a reason such as illness, you should keep your TA and me posted on a regular basis so that we can do whatever we can to help you avoid falling too far behind.

You should read the book, furthermore, and come prepared to push your understanding further. I sometimes hear students remark about the uselessness of a particular textbook or of a particular lecture. The reality is that reading or learning most material, especially in a statistics class, requires that you are exposed to it multiple times. Don’t expect to understand the book the first time you read it. Don’t expect to master the material after coming to a single lecture. It takes reading, hearing, and applying the material to grasp the concepts.
Please be on time both for lectures and labs. For labs, please plan to arrive early enough to log on to your computer so that you are ready to go once the hour begins.

### 5.3 Make-up Exams and Assignments

No make-up exams will be given unless either prior consent is obtained from the instructor or you document an emergency or some other commensurate event. Assignments are due every Friday by 10 am. **Papers arriving late will be not be accepted. No exceptions.** You need to turn in your paper in the political science department drop box. If your paper arrives later than 10 am, it will not be accepted. The final exam will be given out on the first day of exam week and is designed to take as much time as you would devote to preparing and taking an exam from another class.

### 5.4 Academic Integrity

BYU students should seek to be totally honest in their dealings with others. They should complete their own work and be evaluated based upon that work. They should avoid academic dishonesty and misconduct in all its forms, including plagiarism, fabrication or falsification, cheating, and other academic misconduct. Students are responsible not only to adhere to the Honor Code requirement to be honest but also to assist other students in fulfilling their commitment to be honest. (complete version of the Academic Honesty Policy available at [honorcode.byu.edu](http://honorcode.byu.edu)).

While all students sign the honor code, there are still specific skills most students need to master over time in order to correctly cite sources, especially in this new age of the internet; as well as deal with the stress and strain of college life without resorting to cheating. Please know that as your professor I will notice instances of cheating on exams or plagiarizing on assignments and papers. See [honorcode.byu.edu](http://honorcode.byu.edu) for specific examples of intentional, inadvertent plagiarism, and fabrication, falsification.

Work and writing submitted for credit at BYU must consist of the student’s own ideas presented in sentences and paragraphs of his or her own construction. The work of other writers or speakers may be included when appropriate (as in a research paper or book review), but such material must support the student’s own work (not substitute for it) and must be clearly identified by appropriate introduction and punctuation and by footnoting or other standard referencing.

The substitution of another person’s work for the student’s own or the inclusion of another person’s work without adequate acknowledgment (whether done intentionally or not) is known as plagiarism. It is a violation of academic, ethical, and legal standards and can result in a failing grade not only for the paper but also for the course in which the paper is written. In extreme cases, it can justify expulsion from the University. Because of the seriousness of the possible consequences, students who wonder if their papers are within these guidelines should visit the Writing Lab or consult a faculty member who specializes in the teaching of writing or who specializes in the subject discussed in the paper. Useful books to consult on the topic include the current *Harbrace College Handbook*, the *MLA Handbook*, and James D. Lester’s *Writing Research Papers*.
Unfortunately, the above language has not been sufficient to communicate to some students the importance of integrity. With Professor Goodliffe’s permission, I reproduce the following material from his syllabus, which outlines well what is expected of you both in study groups and in your work more generally.

Study groups are considered an educationally beneficial activity. However, at the end of each problem on which you collaborated with other students you must cite the students and the interaction. The purpose of this is to acknowledge their contribution to your work. Some examples follow:

1. You discuss concepts, approaches and methods that could be applied to a homework problem before either of you start your written solution. This process is encouraged. You are not required to make a written acknowledgment of this type of interaction.

2. After working on a problem independently, you compare answers with another student, which confirms your solution. You should acknowledge that the other student’s solution was used to check your own. No credit will be lost if the solutions are correct and the acknowledgments is made.

3. After working on a problem independently, you compare answers with another student, which alerts you to an error in your own work. You should state at the end of the problem that you corrected your error on the basis of checking answers with the other student. No credit will be lost if the solution is correct and the acknowledgment is made, and no direct copying of the correct solution is involved.

4. You and another student work through a problem together, exchanging ideas as the solution progresses. Each of you should state at the end of the problem that you worked jointly. No credit will be lost if the solutions are correct and the acknowledgment is made. [You must still write up your solutions individually, not jointly.]

5. You copy all or part of a solution from a reference such as a textbook. You should cite the reference. Partial credit will be given, since there is some educational value in reading and understanding the solution. However, this practice is strongly discouraged, and should be used only when you are unable to solve the problem without assistance.

6. You copy verbatim all or part of a solution from another student. This process is prohibited. You will receive no credit for verbatim copying from another student when you have not made any intellectual contribution to the work you are both submitting for credit.

7. VERBATIM COPYING OF ANY MATERIAL WHICH YOU SUBMIT FOR CREDIT WITHOUT REFERENCE TO THE SOURCE IS CONSIDERED TO BE ACADEMICALLY DISHONEST.
Unfortunately, some students still profess ignorance of or attempt to find loopholes in the previous guidelines. As a result of sad experience, I repeat the following guidelines and add clarifications:

1. You may work together on the weekly assignments (in groups of two or at most three), but you must write up your answers separately. Starting with a group document and then giving copies of that document to members of the group is not writing up answers separately, even if individuals make various changes to the original document. **You must start with separate, individual answers.** If you find yourself emailing or copying files having to do with weekly assignments, you are almost certainly violating this policy. If a group is working on a single computer to conduct analyses, which are then recorded and shared, then the group is almost certainly violating this policy. If you work together on one computer, then you need to wait until you have separate computers to write up your answers. The first time I see group work turned in as individual work (even with “worked with” citations), I will take the number of points earned and divide it by the number of people in the group. The next time, the penalty will be -100% (note: not 0, but -100%).

2. There are no “student solutions manuals” for Stock and Watson, 2nd ed. There is a student solutions manual for Stock and Watson, 1st ed., labeled “Solutions for Selected Exercises.” It is of limited usefulness, as the problems and chapters have changed in the current edition. (It has answers to some, not all, problems in the 1st ed.) If you can track down a copy, you may use it (assuming there is anything useful), provided you follow the citation guidelines discussed above (for which you only get partial credit). As with most textbooks, there is an “instructor solutions manual.” (It has answers to all problems.) You may not use this. It is only possible to get a copy of this through illicit means (e.g. sending money by PayPal to something equivalent to an essay mill, downloading from some BitTorrent site, etc.). If you have a copy of this, you are in violation of the Honor Code, and I will refer you to the Honor Code Office.

3. A good shorthand for violating the Honor Code is knowing something is wrong and doing it anyway. Anytime I find a student attempting to deceive me in any way, I will refer that student to the Honor Code Office.

4. If you have any questions about these guidelines, please ask me. Do not attempt to exploit loopholes.

## 5.5 Classroom Civility

Regrettably, a handful of students occasionally demonstrate insensitivity to other students and to instructors by disrupting classes unnecessarily. Arriving late for class, reading newspapers in class, packing up bags prior to the end of class, and cell phone use are all disruptive activities. Browsing the internet, checking email, and playing games on laptops are also inappropriate in class because you should be listening and participating.
Certainly, taking notes on a laptop is appropriate, but do not waste your time or mine by getting distracted by other activities on the web. Moreover, I will not tolerate incivility of one opinion to another. It is exciting and healthy to exchange a diversity of opinions, but in no case should anyone demean another because of his or her viewpoint. In a statistics class, many concepts are difficult to grasp and student understanding is not uniform across the class. If students ask questions that you feel others should already know, this should never be cause for frustration or otherwise being impatience. You might find yourself on the other end with a different statistical concept. If you have any questions about what classroom civility entails, please contact me.

5.6 Discrimination and Access

**Discrimination:** Title IX of the Education Amendments of 1972 prohibits sex discrimination against any participant in an educational program or activity that receives federal funds. The act is intended to eliminate sex discrimination in education. Title IX covers discrimination in programs, admissions, activities, and student-to-student sexual harassment. BYU’s policy against sexual harassment extends not only to employees of the university but to students as well. If you encounter unlawful sexual harassment or gender based discrimination, please talk to your professor; contact the Equal Employment Opportunities Office at 422–5895 or 367–5689 (24-hours); or contact the Honor Code Office at 422–2847.

**Access:** Brigham Young University is committed to providing a working and learning atmosphere which reasonably accommodates qualified persons with disabilities. If you have any disability which may impair your ability to complete this course successfully, please contact the University Accessibility Center (422–2767). Reasonable academic accommodations are reviewed for all students who have qualified documented disabilities. Services are coordinated with the student and instructor by the UAC office. If you need assistance or if you feel you have been unlawfully discriminated against on the basis of disability, you may seek resolution through established grievance policy and procedures. You should contact the Equal Employment Opportunity Office at 422–5895, D–282 ASB.

5.7 Tentative Course and Reading Schedule

Jan 5: Course Introduction and Beginning Probability

- SW: 1, 2.1–2.3
- SW: 13.1–13.2
- Agresti/Finlay, 2.1–2.3 and 3.1–3.4 (blackboard)
- Assignment 0 is due on January 6

Jan 10, 12, & 17: Probability and Sampling
SW: 2.4-2.5

Agresti/Finlay: 4.1-4.6 (blackboard)

Homework 1 is due on January 13

Please note the following Stata workshops this week. I encourage you to attend

- Tues, Jan 10: 7 pm, 102 SWKT
- Weds, Jan 11: 3 pm, 112 SWKT
- Weds, Jan 11: 7 pm, 102 SWKT
- Thurs, Jan 12: 11 am, 102 SWKT
- Thurs, Jan 12: 7 pm, 102 SKWT
- Fri, Jan 13: 3 pm, 112 SWKT

Jan 19, 24, & 26: Hypothesis Tests and Confidence Intervals

- SW: Chapter 3
- Homework 2 is due on January 20
- January 26: Review Session
- Homework 3 is due on Jan 27
- Project proposal is due on Jan 27 (in lab)

Jan 31 & Feb 2: Simple Linear Regression: Estimation and Assumptions

- SW: Chapter 4
- Homework 4 is due on Feb 3

Feb 7 & 9: Regression: Hypothesis Tests and Confidence Intervals

- SW: Chapter 5
- Homework 5 is due on Feb 10

Feb 14 & 16: Multiple Regression: Estimation and Assumptions

- SW: Chapter 6
- Homework 6 is due on Feb 17
- Data summary is due on Feb 17 (in lab)

Feb 23 & 28: Multiple Regression: Hypothesis Tests and Confidence Intervals

- SW: Chapter 7
Mar 1: Midterm Exam / Project Consultations

- Midterm Distributed: Feb 27
- Midterm Due: March 2

Mar 6, 8, & 13: Nonlinearity and Interactions / Project Consultations

- SW: Chapter 8
- Homework 7 is due on Mar 9
- Outline is due on Mar 9 (in lab)

Mar 15: Internal and External Validity

- SW: Chapter 9
- Homework 8 is due on Mar 16

Mar 20, 22, & 27: Panel Data

- SW: Chapter 10
- Rough Draft is due on Mar 23 (in lab)
- Homework 9 is due on Mar 30

Mar 29, Apr 3, & Apr 5: Binary Dependent Variables

- SW: Chapter 11
- Homework 9 is due on Mar 30
- Homework 10 is due on Apr 6

Apr 10: Future Topics: Quasi-Experiments and Instrumental Variables

- SW: Chapter 12 and 13
- Homework 10 is due on Apr 6
- Final draft of project due on Apr 10 in class

Final Exam: Take Home Distributed on First Day of Exam Week