

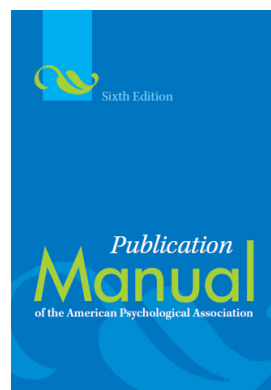
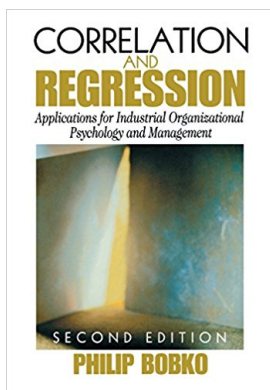
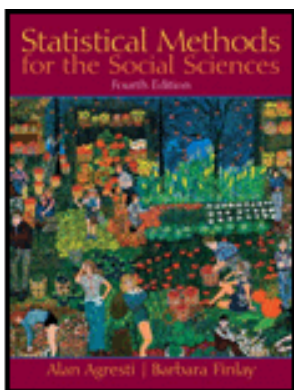
### Class Information

- Lecture:** Mondays, Wednesdays, and Fridays 9 – 9:50 AM in Glatfelter Hall 402
- Labs:** Tuesdays 7 – 8 PM (**Section LC1 only**) or Tuesdays 8 – 9 PM (**Section LC2 only**) in Plank Gym 111
- Final exam:** Monday, December 10<sup>th</sup> 8:30 – 11:30 AM in Glatfelter Hall 402
- Email:** [abrawley@gettysburg.edu](mailto:abrawley@gettysburg.edu)
- Office and hours:** 412 Glatfelter Hall, Mondays and Wednesdays 10 – 11:30 AM, and other times by appointment

### Required Materials & Tools

#### Textbooks:

1. Agresti's *Statistical Methods for Social Sciences* (4th edition)
2. Bobko's *Correlation and Regression: Applications for Industrial Organizational Psychology and Management* (2nd ed.)
3. *Publication Manual of the American Psychological Association* (6th ed.)



**Calculator:** You will need a calculator with a square root function that is not your phone or computer.

**Software:** You will use SPSS for labs and your final project. SPSS is available on the lab computers across campus.

**Course communication:** Check Moodle and your College email regularly.

### Course Goals

This class and lab will provide you with training to understand and use statistics in OMS, including how to best collect and manage quantitative data, describe and analyze that data, and interpret results to make conclusions about people in organizations. Specifically, after OMS 235, you will:

- Understand the logic of hypothesis testing in research
- Understand the "big four" statistical models in social science: *t*-tests, analyses of variance, correlation, and regression
- Be able to choose among these analyses to best solve a problem or answer a question
- Be able to conduct these analyses, both by hand and using computer software
- Be able to interpret statistical findings, both for research and non-research audiences
- Be able to create and understand graphs that illustrate statistical findings
- Be well-prepared to use your statistical knowledge to address real questions in organizations

**Why is statistics required for OMS?** Statistical analysis is how we answer many questions in OMS research, which is the basis of every other OMS class you've taken, are taking, and will take. Even if you aren't planning on a career as a researcher after you finish your OMS classes, all workplaces are now moving towards using data – and analyses of that data – to make well-informed decisions. (Silver lining: folks at Google have called statistician the [sexiest job of the 21<sup>st</sup> century](#). You're welcome.)

### Course Requirements

Assignment	#	Points Each	Total Points (% of Grade)
<b>Practice</b>			
Class participation	38	Approx. ½	20 (5%)
Lab assignments	10	3	30 (8%)
Problem sets	12	2.5	30 (8%)
<b>Exams</b>			
Quiz	1	20	20 (5%)
Midterm exams	2	60	120 (30%)
Cumulative final exam	1	140	140 (35%)
<b>Final Project</b>			
Final research project	1	40	40 (10%)

Total possible points: 400

Grade	%	Min. Points	B	82.5 – 87.4%	330	D+	67.5 – 69.9%	270
A	92.5%+	370	B-	80 – 82.4%	320	D	62.5 – 67.4%	250
A-	90 – 92.4%	360	C+	77.5 – 79.9%	310	D-	60 – 62.4%	240
B+	87.5 – 89.9%	350	<b>C</b>	<b>72.5 – 77.4%</b>	<b>290*</b>	F	0 – 59.9%	0
			C-	70 – 72.4%	280			

Your grades will be posted regularly on Moodle. Address any concerns early, and concerns about specific grades should be addressed within a week of being posted on Moodle. **\*The OMS major requires a “C” or better in OMS 235.**

**Class participation:** On all non-exam class dates, participation will be graded. You must be in class to earn credit. In general, **full participation credit** will be awarded to students who come to class prepared, are consistently attentive, and make thoughtful contributions. **Reduced – or even “0” – participation credit** will be awarded to students who miss class (or an important activity during class – e.g., by arriving late or leaving early), come to class unprepared, are distracted, or avoid participation altogether.

**Lab assignments:** Every lab meeting will involve a graded lab assignment. These are designed to train you to use SPSS and APA style effectively, so that you are well prepared to do independent work on your final project (and beyond OMS 235).

**Problem sets:** Hard copies of 12 problem sets – to be posted on Moodle – will be due at the beginning of class on the days listed in the course schedule. Problem set grades will be effort based, so show the steps of your work wherever possible.

**Exams:** Exams will be based on the textbooks, lectures, in-class activities, lab assignments, and problem sets. Exam questions may include multiple choice, short answer, and calculations. Bring a writing utensil and a non-phone, non-computer calculator.

**Final project:** In a final project, you’ll conduct your own research study – including developing the questions, gathering and analyzing data, and presenting your findings. Details will be provided to you in class and on Moodle.

### Other Important Policies & Information

**Attendance:** Missing class or lab will directly (through missed points) and indirectly (because statistics is cumulative and moves fast) affect your grade. You're responsible for all material covered in the lectures, including any announcements. I’m happy to answer Qs after you get the missed info from a classmate. **You may only attend the section of lab that you're officially enrolled in.** For planned (or emergency) absences, email me with documentation prior to the absence (or ASAP).

**Late work policy:** Late submissions will result in a grade of zero. Ensure that any submitted electronic files are the correct, working file. When hard copies are required, electronic copies will not be accepted as a substitute. You can submit hard copies directly to my office any time the fourth floor of Glatfelter is open.

**Electronic devices policy:** This class is challenging and moves fast – there is not time to waste being distracted. Affordances matter; make it easy to stay focused by silencing your phone and zipping it up in a bag out of easy reach, and by using site-blocking browser add-ons or shutting off your laptop's wifi.

**Academic honesty:** The Honor Code is taken seriously in OMS 235 in order to uphold our department's reputation for training quality statisticians. If you violate the Honor Code, penalties may include failure of the assignment, exam, or entire course.

**Requesting accommodations:** Contact Academic Advising to develop an Individual Education Accommodation Plan (IEAP). Then we'll use your IEAP as a guide to establish how accommodations will be implemented. Provide me with your IEAP at least two weeks prior to the first event (e.g., an exam) for which you request an accommodation.

**Using office hours effectively:** Office hours and appointments are extremely popular in OMS 235, and I am always happy to work with students one-on-one. However, to be sure that everyone in class can benefit from similar time, I will expect you to come prepared to use our meeting time effectively – bring specific questions, problems, or topics to discuss, or work as far as you can on a given problem (e.g., up until the point where you are confused) before we meet.

**How to succeed in OMS 235:** In short, put in regular effort and attention in and outside of class. Read the assigned readings before class and give your best effort on the problem sets, so that you come ready to get the most out of class time. Ask questions in class (or one-on-one, see above). This class is very strongly cumulative, meaning that if you get lost in Week 3, you can't wait until you're studying for the exam in Week 6 to ask about that question from Week 3 – you will have misunderstood almost everything that followed it. Consistent, sincere attention and effort will help you keep up with the class.

**In case you aren't excited and motivated yet...:** Starting this semester, I will make a standing challenge to my OMS 235 classes: if the class earns an 85.0% (or higher) average over the whole semester, I will get a tattoo of my favorite statistical equation.

#### Some Key Dates

Date	Deadline
F 9/7	Last day to drop/add
F 11/9	Last day to withdraw with a "W"

### Course Schedule

Any changes to this schedule will be communicated to you in class. A&F = Agresti & Finlay text. B = Bobko text.

Date	Class Topic (Readings)	Due Dates	Date	Lab
M 8/27 W 8/29 F 8/31	Data, statistics, and method basics (A&F 1 & 2)		<b>T 8/28</b>	<b>No lab</b>
M 9/3 W 9/5 F 9/7	Sampling & measurement; descriptive statistics (A&F 2 & 3)	<b>F 8/31: Set 1</b> <b>W 9/5: Set 2</b>	T 9/4	Lab 1
M 9/10 W 9/12 F 9/14	Descriptive statistics; probability (A&F 3 & 4)	<b>M 9/10: Set 3</b> <b>F 9/14: Set 4</b>	T 9/11	Lab 2
M 9/17 W 9/19	Probability (A&F 4)		T 9/18	Lab 3
<b>F 9/21</b>	<b>Quiz</b>			
M 9/24 W 9/26 F 9/28	Probability distributions (A&F 4)	<b>W 9/26: Set 5</b>	T 9/25	Lab 4
M 10/1 W 10/3	Inferential statistics (A&F 5 – omit 5.5)	<b>M 10/1: Set 6</b>	<b>T 10/2</b>	<b>No lab</b>
<b>F 10/5</b>	<b>Exam 1</b>			
<b>M 10/8</b>	<b>Reading day – no class meeting</b>		<b>T 10/9</b>	<b>No lab</b>
W 10/10 F 10/12	Inferential statistics (A&F 6.1 – 6.5)	<b>F 10/12: Set 7</b>		
M 10/15 W 10/17 F 10/19	Independent samples (A&F 7.1 – 7.3)	<b>F 10/19: Set 8</b>	T 10/16	Lab 5
M 10/22 W 10/24 F 10/26	Independent samples; dependent samples (A&F 7.1 – 7.5, 7.8)	<b>W 10/24: Set 9</b>	T 10/23	Lab 6
M 10/29 W 10/31	Dependent samples (A&F 7.4 – 7.5, 7.8)		T 10/30	Lab 7
<b>F 11/2</b>	<b>Exam 2</b>			
M 11/5 W 11/7 F 11/9	One-way ANOVA (A&F 12.1 – 12.2)	<b>M 11/5: Proposal</b> <b>F 11/9: Set 10</b>	T 11/6	Lab 8
M 11/12 W 11/14 F 11/16	Correlation (B 1 & 2 p. 12 – 24, 27 – 42)	<b>F 11/16: Set 11</b>	T 11/13	Lab 9
M 11/19	Correlation (B 3 p. 43 – 48, 58 – 66)		<b>T 11/20</b>	<b>No lab</b>
<b>W 11/21</b> <b>F 11/23</b>	<b>Thanksgiving break – no class meeting</b>			
M 11/26 W 11/28 F 11/30	Regression (B 6 p. 118 – 146, 151 – 157)		T 11/27	Lab 10
M 12/3	Regression (B 6 p. 118 – 146, 151 – 157)	<b>M 12/3: Set 12</b>	<b>T 12/4</b>	<b>No lab</b>
<b>W 12/5</b> <b>F 12/7</b> <b>M 12/10</b>	<b>Final project presentations due 9 AM</b> <b>Final project presentations, continued</b> <b>Final exam 8:30 – 11:30 AM</b>	<b>W 12/5: Pres.</b>		