STAT 250: Introduction to Biostatistics  
Department of Statistics, Penn State University  
Fall 2015

Teaching Team
Professor  Dr. Kari Lock Morgan, klm47@psu.edu  
Assistant Professor of Statistics  
Office hours: 12:30 – 2pm Mon and 2:30 – 4:00pm Wed in 323B Thomas

TA and Las  
Section 1 (11:15am):  
TA: Qingyu Wang, qw102@psu.edu, 3:30 – 5pm Thursday  
LA: Ruijun Wu, rpw5137@psu.edu, 5 – 6pm Thursday

Section 2 (12:20pm):  
TA: Meridith Bartley, bartley@psu.edu, 2:30 - 3:30 and 7:30 – 9pm Thursday  
LA: Mario Hernandez, mvh5588@psu.edu, 5 - 6pm Wednesday

Section 3 (1:25pm):  
TA: Meridith Bartley, bartley@psu.edu, 2:30 - 3:30 and 7:30 – 9pm Thursday  
LA: Priyanka Solanki, pis5173@psu.edu, 4 – 5pm Wednesday

Guided Study Group  
GSG Leader: Mario Hernandez, mvh5588@psu.edu  
GSG Sessions: 6 – 7pm Thurs and 6:30 – 7:30pm Sun in 014 Life Sciences

Class and Lab Meeting Times

Lectures  
10:10 – 11am Monday and Friday in 112 Kern Graduate Building

Labs  
11:15 – 12:05pm, 12:20 – 1:10pm, or 1:25 – 2:15pm Wednesday in 214 Boucke

Required Materials

Textbook  
Statistics: Unlocking the Power of Data; Lock, Lock, Lock Morgan, Lock and Lock  
WileyPlus is required for online homework, and includes the full ebook, video tutorials, and practice problems.  Register at www.wileyplus.com with course ID 461647 (info).

Clicker  
i>clicker; register by 9/4/15 at clickers.psu.edu

Course Websites

Main website: www.personal.psu.edu/klm47/Courses/STAT250/Fall2015/schedule.htm  
(Includes lecture slides, labs, course documents, and links to all other course websites)

Textbook, videos, and online homework: WileyPlus - www.wileyplus.com  
Grades: ANGEL - www.cms.psu.edu

Course Objectives

In this course we’ll learn how to effectively collect data, describe data, and use data to make conclusions about real world phenomena. After finishing this course, you should be able to:

- Recognize the importance of data collection and its role in determining scope of inference.
- Demonstrate a solid understanding of interval estimation and hypothesis testing.
- Choose and apply appropriate statistical methods for analyzing one or two variables.
- Use technology to perform descriptive and inferential data analysis for one or two variables.
- Interpret statistical results correctly, effectively, and in context.
- Understand and critique data-based claims.
- Appreciate the power of data.
A more detailed list of learning objectives and a tentative course schedule can be found online:
http://www.personal.psu.edu/klm47/Courses/STAT250/Fall2015/LearningObjectives.htm
http://www.personal.psu.edu/klm47/Courses/STAT250/Fall2015/schedule.htm

**Communication**

We will be using Piazza (rather than email) for all class-related discussion and questions, to help you benefit from each other’s questions and the collective knowledge of your classmates, LAs, TAs, and professor. Questions can be posted publically to the entire class (for content-related questions), or privately to the teaching team (for personal questions). We encourage you to ask questions if you are struggling to understand a concept, and to answer your classmates’ questions when you can. Piazza will also be used for course announcements.

**Grade Breakdown**

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clicker (MF Class)</td>
<td>10%</td>
</tr>
<tr>
<td>Lab</td>
<td>10%</td>
</tr>
<tr>
<td>Homework</td>
<td>10%</td>
</tr>
<tr>
<td>Midterm Exams</td>
<td>40%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>30%</td>
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</tbody>
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Final letter grades will be determined as follows:
- B+: 87-89%
- C+: 77-79%
- A: 93-100
- B: 83-86%
- C: 70-76%
- D: 60-69%
- F: < 60%
- A-: 90-92%
- B-: 80-82%

Grades will be updated on ANGEL after each exam.

**Components of the Course and Policies**

**Clickers**

We will use i>clickers throughout this course. Clicker questions will be multiple choice, and usually more conceptual, rather than computational. In class, you are not expected to always know the right answer, so credit is awarded simply for clicking in. However, it is to your benefit to try to get the right answer; the point is to think and actively engage with the material while it is being presented.

Clicker grading will begin 9/4/15. It is your responsibility to come to class and remember your clicker, but you may miss clicking in for two classes without penalty. If you have an unavoidable legitimate absence, post to instructors on Piazza with your excuse before the class to be missed. If you anticipate missing more than two classes for legitimate, please see Professor Morgan during the first two weeks of classes. Clickers may not be shared, and only you can use your clicker. Failure to abide by this will result in a 0 clicker grade for everyone involved.

**Labs**

Labs are Wednesdays in 214 Boucke. The primary goals of the labs are to (1) teach you how to use statistical software, and (2) offer valuable hands-on experience doing statistics in a supervised setting. If you need to miss a lab and have a legitimate excuse, post to instructors on Piazza with your excuse before the lab to be missed, and in this case the lab will need to be completed on your own and turned in to your TA before the next lab. Clickers will be used to assess topics covered in the lab, and in this case clicker grading will be 75% participation and 25% accuracy.

**Homework**

There will be weekly homework assignments due on Fridays before class. You may collaborate on homework (this is encouraged!), but we recommend trying problems on your own first to prepare you for exams. The primary goal of homework is to help you learn and to prepare
you for exams (so copying someone else’s homework is only hurting you). Homework will be assigned after every class, and completing it as soon as possible after it is assigned is recommended (it will be easiest right after you learned it, and will help solidify the concepts from the previous class, making it easier to learn new material). Late homework is accepted for half credit, up until the first exam on that material.

Homework will be comprised of two parts: practice and graded. Only the graded problems count towards your homework grade; the practice problems are purely for your own benefit. If you are struggling with the graded problems, we recommend doing the practice problems first, as these are similar to the graded problems, but with full solutions available in WileyPlus.

**Exams**

There will be two midterm exams (10/9 and 11/9) in class, and a final exam. These exams will be closed to all materials except for a non cell-phone calculator and one (Exam 1), two (Exam 2), or three (Final) single-sided 8 ½ 11 pages of notes. Exams are mandatory, and must be taken at the given time. Unavoidable legitimate reasons for not being able to take the exam must be to instructors on Piazza and approved in advance. Excuses submitted after the exam start will not be accepted. Re-grading requests must be made within one week of when the graded exam is returned, will be honored only if points were tallied incorrectly or if your answer is fully correct but was marked wrong.

**Keys to Success**

My goal in teaching this class is to help you learn statistics and help you succeed in this course. Here are several suggestions to help you succeed:

1. Come to class ready to pay attention and think. Class is designed to give you opportunities to actively engage with the material; take advantage of this!
2. Try the homework by yourself first, get help where needed, and make sure you understand all the problems by the time you turn it in.
3. Attend every lab, and spend time in lab working on statistics and engaging in discussion of the material. Ask your peers, TA, or LA to explain if you are confused.
4. Stay on top of the material and clear up confusion as it occurs. The material in this class is cumulative, and it will be easier to learn new material if you understand the previous material.
5. Do lots of practice problems. Answers and full solutions to all the odd problems are given in WileyPlus, so you have as many problems as you want to practice on!
6. If you are struggling: read the textbook, watch the videos, try the practice problems, attend GSG sessions, form a study group, come to office hours, and/or post questions to Piazza.

**Academic Integrity Statement:** All Penn State and Eberly College of Science policies regarding academic integrity apply to this course. See the Academic Integrity Policy and Code of Conduct for details. Violations of academic integrity may result in failure of the course.

**ECOS Code of Mutual Respect:** The Eberly College of Science Code of Mutual Respect and Cooperation embodies the values that we hope our faculty, staff, and students possess and will endorse to make the Eberly College of Science a place where every individual feels respected and valued, as well as challenged and rewarded.

**Disability Policy:** Penn State welcomes students with disabilities into the University's educational programs. If you have a disability-related need for reasonable academic adjustments in this course, contact the Office for Disability Services (ODS) at 814-863-1807, 116 Boucke, [http://equity.psu.edu/ods/](http://equity.psu.edu/ods/). In order to receive consideration for course accommodations, you must contact ODS and provide documentation (see the guidelines at [http://equity.psu.edu/ods/guidelines/documentation-guidelines](http://equity.psu.edu/ods/guidelines/documentation-guidelines)).