Instructor: Dr. Leonore Findsen
Email: lfindsen@purdue.edu
Office: MA 548
Phone: 494-4505

Division: 88/89/91/93 9:30 am – 10:20 pm MF: UNIV 019  W: Lab SC 231
On Wednesday Jan. 20, Feb. 3 and March 8, we will have lecture in UNIV 019.

Graduate Teaching Assistant:
Jincheng Bai

Office Hours:
• Professor: TBA (I will decide what they are on Monday and post them on the class website and Blackboard)
• Additional office hours managed by course graduate teaching assistants will be held in the Stat Help Room located at HAAS 115. Office hour schedule is posted on the class website and Blackboard, however, will on Mondays, Tuesdays, and Thursdays.
• SAS/350 Help Session 6:30 – 8:30 on Wednesdays (except during holidays) in B282.

ISBN: 978-1-46-415761-5 (LaunchPad only (12 month, e-textbook included --- REQUIRED)
(This may also be purchased directly from LaunchPad)
ISBN: 978-1-46-417986-0 (LaunchPad w. Loose Leaves Textbook -- Optional)

VERY IMPORTANT DATES (Please mark your calendar)
Exam 1  6:30 PM - 7:30 PM Tuesday          Feb. 23, 2016          WTHR 200
Exam 2  6:30 PM - 7:30 PM Tuesday          April 12, 2016         WTHR 200

Calculus 2 (integration) is a prerequisite for this course. You will be required to perform integrations on the homework and the exams.

Our Statistics Philosophy:
This is not a math class. This is a critical thinking class. Our goal is to help you make wise and educated decisions at work and in life.
“Statistical thinking will one day be as necessary for efficient citizenship as the ability to read and write.”
H.G. Wells

Grading Policy:
Final course grades are determined by the following weights:

<table>
<thead>
<tr>
<th>Category</th>
<th>Flipped</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation</td>
<td>10%</td>
</tr>
<tr>
<td>Course Evaluation</td>
<td>1%</td>
</tr>
<tr>
<td>Homework – Online</td>
<td>2%</td>
</tr>
<tr>
<td>Homework – Written</td>
<td>7%</td>
</tr>
<tr>
<td>Labs</td>
<td>12%</td>
</tr>
<tr>
<td>Group Project</td>
<td>3%</td>
</tr>
<tr>
<td>MIDTERM Exams</td>
<td>20% x 2</td>
</tr>
<tr>
<td>Final Exam</td>
<td>25%</td>
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<tr>
<td>TOTAL</td>
<td>100%</td>
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</tbody>
</table>

The letter-grade cutoffs for this course are approximately:
≥ 90       A-/A/A+/       80 – 90-       B-/B/B+
70 – 80-   C-/C/C+        60 – 70-       D-/D/D+
<60        F

I reserve the right to change the grading scheme should unusual circumstances demand it.

This SYLLABUS is subject to change. All changes will be posted on Blackboard.
Learning Outcomes:
1. Statistical Literacy: Students will be able to use basic terms and symbols, construct graphs, and interpret and analyze statistics in the media.
2. Statistical Reasoning: Students will be able to explain statistical processes and fully interpret statistical results.
3. Big Ideas in Statistics: Students will be able to explain foundational concepts in statistics such as variability, distributions, models etc., and apply these concepts in statistical process.
4. Statistical Thinking: Students will be able to assess statistical problems, and justify and apply statistical methods used to solve the problem.
5. Statistical Computing: Students will be able to analyze data and interpret results using a statistical software package.

LaunchPad: (http://www.macmillanhighered.com/launchpad/introstats2e/2844412)
This link is also on Blackboard. The homework assignments and videos are posted here. In addition, you can access the e-book from this site. Details for registering on LaunchPad are in Blackboard and the following link. It is each student's responsibility to be sure that their homework is in the correct section. If a mistake is made, please contact your instructor as soon as possible. We reserve the right to not give credit for assignments in incorrect sections.

In general, there are two ways that you can contact tech support if you are having problems:
- filling out this online form; this will help them have all the information that they need to understand what your problem is
- by phone at 1-877-587-6534

Book Website: (http://bcs.whfreeman.com/introstats/)
This link is also in Blackboard. This sites contains the complete data sets, practice quizzes for each chapter, and the option of downloading the tables from the book in a pdf file.

Course Website: (http://www.stat.purdue.edu/~lfindsen/stat350/stat350_sp16.html)
This link is also on Blackboard. The syllabus, current schedule, tables, slides, information for homework, computer labs, projects, exams and other resources are available in this site. The Syllabus Assignment will also include questions concerning the web site.

Blackboard: (https://mycourses.purdue.edu/)
All announcements will be posted here including changes in due dates; important announcements will also be sent directly to your Purdue e-mail account. It is your responsibility to read the e-mails and keep track of the announcements.
All online submissions will be on Blackboard. This includes the written homework assignments, lab reports and project reports.
Your grades will also be posted online in this location. It is your responsibility to make sure the grades recorded on Blackboard are correct. The homework grades on LaunchPad will NOT be listed on Blackboard, only the written assignments will be recorded. All grades in Blackboard and LaunchPad (other than the final exam) are final before the final exam. If there is a mistake on a grade, you must inform your instructor electronically in a timely manner (see below for details).

This SYLLABUS is subject to change. All changes will be posted on Blackboard.
This link is also on Blackboard. We will use Piazza (a free online discussion board) for questions and online discussions. This forum is a replacement for asking questions in class and/or office hours, especially if you are confused about the material in the book or the Videos. In addition, I will be posting additional discussion questions based on the readings. Everything that I post on piazza can be tested on in the homework and the exams. The discussion board will be carefully and frequently monitored. Most questions will be answered within 24 business hours. Please use piazza Q&A for all homework, lab, and general questions and as a forum to create groups for your projects or study groups.

It is not appropriate to post answers to homework on this forum. If you are concerned if a post is appropriate, you may post the question privately and someone will respond to you only.

I want to emphasize that if you have any questions about the content of the material that you are expected to learn in this course, please post your questions here.

Lectures:
- Attendance is required on Fridays (and Wednesdays if there is no lab) and is optional on Mondays except when explicitly mentioned in class. Class time will consist of worksheets and class discussions. It is required that you take the online quiz before class on Friday (and Wednesday if there is no lab) so that you are prepared for the session. These quizzes which are on Blackboard will be over the reading material. Each one can be taken unlimited number of times before the deadline of 9 am on the day of class and will be counted as credit/no credit if you receive ~80%.
- To ensure all students have positive learning experiences, disruptive behavior in class will not be tolerated. Students who are disruptive will lose points up to 10% of the course grade and will be referred to the Office of Dean of Students. Disruptive behavior includes constantly talking when other people are talking, having cell phones ring in class, noises from laptop computers, etc.

Participation (10%):
- At least 70% of the participation grade will consist of the following.
  1. Completion of the online quizzes with passing scores.
  2. Attendance in class on Fridays or when there is NOT lab on Wednesday.
  3. Group participation in class on Fridays or when there is NOT lab on Wednesday.
- For up to 30% of the grade, I will consider the following:
  4. The submission of your questionnaire by the due date.
  6. Completing the learning curve activity on LaunchPad before the due date for that activity. The score on the gradebook will just indicate completion.
  7. Going to office hours either in my office, the STAT help room or the Wednesday night help session. It is up to you to get the TA to sign the form that is posted on Blackboard and on the misc. web page under ‘Passport’
  8. Other ways that I might indicate later.

Course Evaluation (1%):
- During the last two weeks of the semester, you will be provided an opportunity to evaluate this course, your instructor and TAs using an online evaluation.
- Your participation in this evaluation is an integral part of this course. Your feedback is vital to improving education at Purdue University. You will need to take a screen shot of the screen that shows that you have completed the surveys for STAT 350. Be sure that your screen shot indicates that the completed evaluation is for STAT 350.
Labs (12%):
- Labs will be held on most Wednesdays; please see the Blackboard schedule and Lab web page for details. Lab attendance is recommended but not required as long as the labs are completed on time.
- The due date for the labs is on Thursday night except if there is a group component to an individual lab. In that case, the group component is on Friday night.
- If the number of group members is not 3 – 4, on the labs, then you will need your instructor's approval. All group mates must have the same instructor. Please let me know if there are any problems in forming the groups. For group assignments, only one report needs to be submitted on Blackboard. However, the names of all group members need to be at the top of the report.
- All students have a choice of using SAS or R for their lab assignments. It is strongly recommended that statistics and actuarial students use SAS.
- The lab report is to be turned in electronically on Blackboard in ONE file using PDF format. No late work will be accepted. Computer difficulties are not a valid excuse. Please see the Lab Syllabus for more details.
- One lowest lab score will be dropped at the end of the semester.
- If you need additional help on the labs, you may attend additional lab sections. Please inform the instructor if you are planning to do that because there is limited extra seating especially in SC 231.
- Besides office hours, please see the lab web page for additional ways for getting help on the software packages.

Project (3%):
- There will be one group project this semester which is due at the end of the semester. The specifics will be posted later in the semester. Each group should consist of 2 - 4 students; preferably at least 3 students. Please form your group early in the semester. Again, you may use Piazza to help in forming your groups.

Homework (2% Online and 7% for written):
- Online homework assignments are posted on LaunchPad. I will indicate on the homework web page when they are available. I will also be posting a list of the questions and possible answers if the question is multiple choice on the homework web page. These problems will be multiple choice, true/false and numeric questions where no work is required.
- The scores from the online homework are only a small percentage of the total homework grade. Most of the homework grade will be obtained via written work. These problems will be posted on Blackboard and the homework web page. All assignments will have some written work. This assignment must be submitted via Blackboard in pdf format at the same time as the LaunchPad due date. Tricks on how to create pdf files are posted on Piazza.
- No online homework assignments will be dropped. The lowest written homework score (by percentage) will be dropped at the end of the semester.
- No late work will be accepted. Computer difficulties are not a valid excuse for having late homework. Remember, homework is due 'before Midnight'.

Exams (two midterm exams – 20% each and one final exam – 25%):
- The exams will be closed book exams.
- The exams are night exams on the following dates:
  o Exam 1: Tuesday Feb. 23, 2016 6:30 pm – 7:30 pm WTHR 200
  o Exam 2: Tuesday April 12, 2016 6:30 pm – 7:30 pm WTHR 200
- The statistical tables provided will be mentioned. No formulas will be provided.
- You are permitted to bring one double-sided 8 1/2" x 11" cheat sheet for each of the two midterm exams and two double-sided 8 1/2" x 11" cheat sheets for the Final Exam. The cheat sheet can be typed or written or any combination. Please put your name on your cheat sheet(s).
● You need to bring pens, pencils, and calculators. Graphing calculators (e.g. TI-83) are permitted, but not required. A scientific calculator is required.
● The final exam is comprehensive.
● The final is not returned though students may look at their finals and get their cheat sheets by picking them up from my office after the end of the semester.

Policy for Make-up Exams:
● The format of the makeup exam may differ from the regular exam. It may include questions requiring the use of statistical software and/or oral examination.
● You must have a valid reason to request a makeup exam. Valid reasons include absence due to activities required by Purdue University or job or internship, direct conflict in exams, and/or a death in your family.
● If you must miss an exam for non-emergency reasons, please submit a completed Make-up Exam Form (Blackboard and the misc. web page) to Blackboard with appropriate written documentation to your instructor at least one week in advance of the exam.
● If you are missing the exam due to an emergency, you must e-mail your instructor with details of your situation and the information requested on the Make-up Exam Form no later than 9 am the day after the scheduled exam.
● Failure to meet these deadlines may result in a score of 0 points for the exam.
● Dr. Findsen will need to approve your documentation (university or doctor’s note, obituary, etc.) before your exam grade will be recorded.

We make every effort to accommodate student schedules while also protecting the integrity and security of the exam. Usually only one make-up exam time will be scheduled following each regular exam. The make-up exam time will be chosen based on students’ schedules, room and proctor availabilities.

Re-grade Request
● All re-grade requests must in writing and submitted on either Blackboard or handed to the instructor. No other requests will be accepted.
● To request a re-grade for assignments, you must submit a re-grade form (Blackboard and the misc. web page) within one week from when the assignment is graded. If the assignment is a hard copy, e.g., exams, the re-grade request must be stapled on top of the assignment. If the assignment was submitted electronically then only the re-grade request form needs to be submitted on Blackboard.
● Re-grade requests outside the re-grade window will be denied.
● Any rudeness accompanying a re-grade request will result in the assessment of a “technical foul” penalty equal to the total number of points for the disputed question.

Section Change:
● If you change sections, it is YOUR responsibility to print off your grades from your old Blackboard/LaunchPad site and give them to your new instructor within two weeks of the section change. Remember that you have to withdraw from one section before you add the other and the sections fill up quickly.
● Please observe the deadline for cancelling a course assignment without it appearing on record. The Purdue guidelines are at here. I reserve the right to NOT sign a student out of the course.
Academic Honesty:
- You are expected to uphold The Honor Code of Purdue University.
- All cheating in the course will be referred to the Office of the Dean of Students.
- Any cheating on exams will result in an “F” in the course. This includes communicating details of an exam to other students who have not yet taken the exam.
- Cheating on labs, homework, projects, etc. will result in zero for that assignment and a letter grade reduction.

In STAT 350, we encourage students to work together. However, there is a difference between good collaboration and academic misconduct. We expect you to read over this list; you will be held responsible for violating these rules. We are serious about protecting the hard-working students in this course. We want a grade for STAT 350 to have value for everyone. We punish both the student who cheats and the student who allows or enables another student to cheat (even by not keeping an exam covered). Make sure that you are doing everything you can to protect the value of your work on exams, homework, discussion posts, and even class participation and studying.

Good Collaboration:
- Try all of the homework problems yourself, on your own.
- After working on every problem yourself, then get together with a small group of other students who have also worked on every problem themselves.
- Discuss ideas for how to do the more difficult problems.
- Finish the homework problems on your own so that what you turn in truly represents your own understanding of the material.
- Work the review problems individually, and then use the group for discussion.
- Discuss concepts or practice problems in the group.
- Explain concepts or practice problems to each other.
- If the assignment involves writing a long, worded explanation (like an essay question), you may proofread somebody’s completed written work and allow them to proofread your work. Do this only after you have both completed your own assignments, though.
- Ask a tutor or TA for help on a problem related to a homework problem, but do the actual homework problem yourself. The odd-numbered problems in the book have answers in the back, so they’re great for examples.

Academic Misconduct:
- Divide up the problems among a group. (You do #1, I’ll do #2, and he’ll do #3: then we’ll share our work to get the assignment done more quickly.)
- Post answers to a homework question publically on piazza.
- Attend a group work session without having first worked all of the problems yourself.
- Participate in group work without being prepared, allowing your partners to do all of the work while you copy answers down, or allowing an unprepared partner to copy your answers.
- Start the problem yourself but then copy somebody else’s solution for the rest of the problem after you got stuck.
- Read someone else’s answers before you have completed your work.
- Have a tutor or TA work through all (or some) of your HW problems for you.
- Share lab work, print off two copies of the output, or two people use the same computer to do lab.
- Not keeping your exam covered.

Additional Policy statements are available on Blackboard in the following link.
Approximate Outline

- A more detailed list of sections to be read is on the Blackboard schedule. If sections are skipped, they will be posted on Blackboard and LaunchPad. Additional readings will be assigned on LaunchPad and listed in Blackboard.

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<thead>
<tr>
<th>Chapter</th>
<th>Topic</th>
<th>Sections Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Why Study Statistics</td>
<td>all</td>
</tr>
<tr>
<td>1</td>
<td>Introduction</td>
<td>1.1, 1.2</td>
</tr>
<tr>
<td>2</td>
<td>Graphs for Summarizing Data</td>
<td>2.1, 2.2, 2.4</td>
</tr>
<tr>
<td>3</td>
<td>Numeric Summary Measures</td>
<td>all</td>
</tr>
<tr>
<td>4</td>
<td>Probability</td>
<td>4.1, 4.2, 4.4, 4.5</td>
</tr>
<tr>
<td>5</td>
<td>Random Variables and Discrete Probability Distributions</td>
<td>all (only some parts of 5.5)</td>
</tr>
<tr>
<td>6</td>
<td>Continuous Probability Distributions</td>
<td>6.1, 6.2, 6.3, 6.4, 6.5 (not in the book)</td>
</tr>
<tr>
<td>7</td>
<td>Sampling Distributions</td>
<td>7.1, 7.2</td>
</tr>
<tr>
<td>1</td>
<td>Experimental Design</td>
<td>1.3 + extra readings</td>
</tr>
<tr>
<td>8</td>
<td>Confidence Intervals – Single Sample</td>
<td>8.1, 8.2, 8.3</td>
</tr>
<tr>
<td>10</td>
<td>Confidence Intervals and Hypothesis Tests on Two Samples</td>
<td>10.1, 10.2, 10.3</td>
</tr>
<tr>
<td>11</td>
<td>The Analysis of Variance</td>
<td>11.1, 11.2</td>
</tr>
<tr>
<td>12</td>
<td>Correlation and Linear Regression</td>
<td>12.1, 12.2, 12.4, 12.3</td>
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