STAT 301 (Traditional and Online)
SYLLABUS for Summer 2012

INSTRUCTOR:
EMAIL:

Any student may attend the office hours of any STAT 301 instructor. A master schedule of all STAT 301 office hours will be posted on the course website.

COURSE WEBSITE: http://www.stat.purdue.edu/~csorola/stat301/
COURSE COORDINATOR: Christa Sorola, csorola@purdue.edu

COURSE GOALS:

1) Choose and identify appropriate experimental and sampling designs.
2) Use elementary statistical methods to analyze data.
3) Draw conclusions from these statistical analyses.
4) Use SPSS statistical software, which will give you the skills needed to use many other types of statistical software.
5) Critically evaluate statistical reports written by other people, including other students, researchers, businesses, and reporters.
6) Write statistical reports using correct terminology, analyses, and graphs.

REQUIRED MATERIALS:

1) The textbook: Moore, McCabe, and Craig, Introduction to the Practice of Statistics, 7th edition, W.H. Freeman.
2) Access to SPSS program (see note later in syllabus).
3) Registration with Perdisco online homework and tutoring company (a fee of $35.81 will be charged for this application).
4) A scientific calculator (graphing calculator is ok but not necessary).
5) An activated Purdue University Computing Center career account.
6) A stapler for labs and any other papers you may turn in.
7) Recommended, but not required: StatsPortal (web resource that accompanies the textbook from W.H. Freeman). Access can be purchased with the textbook or e-Book. StatsPortal contains an online SPSS Manual, applets, study help, etc.

ONLINE OR TRADITIONAL:
There is an online version of STAT 301 available, and you may use Banner to switch into the online section within the first week of classes if there are any spots available. However this online section has been full for several weeks, and no overloads are allowed. If you are a traditional STAT 301 student who would like to be able to listen/watch the online lectures on

Blackboard Open Campus for reinforcement (without changing sections), see the course website's Additional Resources page.

If you are an online student who feels, partway through the semester, that you would like to attend lectures, then use the course website to find an instructor whose lecture time works for you. E-mail the instructor to ask if you can sit in on lectures. (The answer is almost always "yes.") You would not make an official switch to that section, but you are welcome to supplement the online lectures with in-person lectures.

What is the difference between traditional 301 and the online 301?
These courses will be run in a very coordinated way. The schedule, syllabus, homework, and calibrated peer reviews are exactly the same for both courses. Here are some of the minor differences:

	Traditional 301	**Online 301**
Lectures	In a classroom with a t.a.; hands-on activities, group work, and opportunities to ask questions in real-time.	Watch online lectures on Blackboard according to schedule. Lectures presented by Ellen Gundlach, a former instructor and course coordinator for Stat 301.
Labs	In an ITaP computer lab with a t.a. and other students to help. Submit lab in person at end of class time.	On your own using detailed instructions. Submit electronically through Blackboard. E-mail lab t.a. with questions.
HW	Assignments and deadlines are the same for traditional and online students. Homework will be submitted online.	
Project	Projects will be turned in to t.a. in class the day that the project is due.	Projects will be turned in to a traditional classroom instructor or mailed/scanned and e-mailed to Christa Sorola before the deadline.
2 Evening Exams and Final Exam	As listed on course website.	Lafayette-area students are treated just like traditional 301 students. Off-campus distance learning students have the option of registering a proctor with the DL office during the first week of classes.
Office hours	Can visit any instructors' office hours, posted on course website.	Can visit any instructors' office hours, posted on course website. Also e-mail Christa Sorola with questions.
Grading scale	See below.	Homework and lab grades are worth a slightly greater percentage each, since there are no class participation points. See below in parentheses for adjusted percentages

GRADES: Final course grades are determined by the following weights:

HW	15% (online: 17%)
Labs	10% (online: 13%)
Project	10% (online: 10%)
Class participation	5% (online: 0%)
Exam 1	20% (online: 20%)
Exam 2	20% (online: 20%)
Final Exam	20% (online: 20%)
Total	100%

The final grade will be calculated according to this formula for traditional students:
0.15·HW% + 0.10·Lab% + 0.05·CP% +0.10 Project% 0.20·Exam1% + 0.20·Exam2% + 0.20·FinalExam% = Total Semester %

The final grade will be calculated according to this formula for online students:
0.17·HW% + 0.13·Lab% + 0.10 Project% 0.20·Exam1% + 0.20·Exam2% + 0.20·FinalExam% = Total Semester %

You should assume that the letter-grade cutoffs for this course are the typical 90-100 for an A, 80-89 for a B, etc. We do not curve. Plus and minus grades may be given for borderline cases. Grades will be posted using Blackboard. We reserve the right to change the grading scheme and course layout should unusual circumstances demand it.

MINORING IN STATISTICS:
If you earn an A in STAT 301, you are on your way to earning a Minor in Statistics! For more information, contact Professor Mark Daniel Ward (mdw@stat.purdue.edu), our department's Undergraduate Studies Chair. We would love to have the opportunity to talk with you about why minoring in Statistics could be a great boost to your future career.

HONORS STAT 301:
To receive Honors credit for STAT 301, a student must submit an honors contract to the UHP or their College of major. In addition to taking the STAT 301 class, you must also complete 3 extension projects with 3 specific due dates during the semester. The description of these projects is listed on the course website. Christa Sorola, the course coordinator, will handle the honors component of the course. If you want STAT 301 honors credit, make sure you fully understand all that is required of you by reading over the course website and asking questions during the **first week of classes**.

EMERGENCIES:
Campus Emergencies: In the event of a major campus emergency, course requirements, deadlines and grading percentages are subject to changes that may be necessitated by a revised semester calendar or other circumstances. Here are ways to get information about changes in this course: course webpage, Blackboard, or by e-mail from the course coordinator or your instructor. General information about a campus emergency can be found on the Purdue website: www.purdue.edu.

Illness and other Student Emergencies: Students with extended illnesses or other emergencies should contact their lecturer and the course coordinator as soon as possible so that arrangements

can be made for keeping up with the course. It may be possible to temporarily switch to the online section if necessary due to health-related issues.

HOMEWORK:

Why do we want you to do homework this way? In order to master these concepts and be able to use them after you leave this course, you need to PRACTICE. You need to analyze data sets and see stories that aren't exactly like what you have seen in class. You need the chance to think through some problems independently. The online homework company that we use lets us custom-select and edit the homework problems that you see, so each problem has been approved by us. The feedback given to you by Perdisco has been edited by us as well. Save and/or print off the feedback you get. You will want it for exam studying later, and once an assignment ends, you can't go back for it later.

- Instructions for registering with and using Perdisco are on the course website on the "Homework and Labs" page.
- Homework will be due according to the posted schedule. The assignments are to be done through Perdisco. During the first week of classes you should register by going to www.perdisco.com/students, clicking on "Create a new account," and paying the specified fee of $35.81. See the course website for further details about using this system.
- **Late homework cannot be accepted by the instructor. Homework is rarely excused.**
- **You have 2 attempts on each homework assignment, and your higher score counts.**
- **One HW score will be dropped at the end of the semester.** If you have an excused HW, this is the one which will be dropped. If you have two excused HWs (very rare), then these two will be dropped. You do not get to drop an additional low HW score just because you have one excused absence. We recommend you start the homework early in the week so that you can make the most of your two attempts. Each HW is scored out of 1.00 point.
- **Computer difficulties are not a valid excuse** for having late homework. It is your responsibility to start the homework early in the week so that you will have time to finish it even if computer difficulties arise.

LABS:

Why do we want you to do labs this way? In lecture, you will see us interpret SPSS statistical output. In the homework you will be on your own to use SPSS to analyze data. In the labs, you get the chance to try SPSS with a data set and step-by-step instructions with the help of your peers and a t.a. in a computer lab. Your major department is expecting you to be able to use statistical software and interpret the results by the time you finish this course.

- The labs will consist of a computer assignment related to the material from lecture. Labs will go more smoothly if you have at least tried some of the homework questions and reviewed your lecture notes ahead of time. Labs are written so that they can be completed in 50 minutes or less if you work **efficiently** and are **familiar with the material**.
- Arrive on time to lab so that you can begin immediately.

- You must turn in the lab and leave the lab at the end of class. It is unfair to the t.a. and to other students if you stay late.
- **There are no make-up labs.** If you are on an athletic team or have a job interview or have some other valid documentable reason for missing multiple labs, contact your instructor **in advance** for a discussion of your options.
- Each lab is worth 20 points, and **one lab score will be dropped**.
- For each of the labs, you are allowed to use your online SPSS manual and other course materials such as lecture notes and your textbook. You are allowed to discuss the lab assignment with the instructor (although your instructor will not DO the lab for you) and with other students, however you are expected to turn in your own independent work. Conversation in lab should be limited to only the lab assignment or course material.

CLASS PARTICIPATION (Traditional students only):

- Your instructor will decide how this part of your grade will be determined. This is the one portion of the course which will be different depending on whom your lecturer is; everything else is very consistent between the sections.
- Online students do not have a class participation component to their grade.
- You are expected to attend each class (or listen to each lecture for the online students) and to participate in the discussion and activities.
- Class participation is worth 5% of your final grade for traditional students.
- If you are absent due to illness or other documentable emergency, it may or may not be possible to work out a way to make up class participation points. Timely documentation for your absence is very important. Do not wait until the end of the semester to turn in documentation for your absence.

PROJECTS:

Why do we want you to do a project? In the real world, you will often read and write about statistics in context. You won't just be given a data set and asked to report a number with a box around it. You will be asked to write about your results. The media collection project gives you the opportunity to read and write about statistics in context in the same way that you will when you leave this class. Statistical literacy requires good communication skills.

- There is only one project option available for the semester. The project is worth a substantial portion of your grade. **No projects will be accepted late**, so please make sure that you know when your project is due.
- Details of the requirements for the media collection project are available on the course website.
- This project is designed to be worked on throughout the semester. Start your project well before the deadline. Technical difficulties will not excuse you from the assignment.
- **All work on the project must be your own independent work, in your own words**. There are many, many sources for articles. Any suspicions of plagiarism, whether from a published or online source or from another student will be turned over to the Office of the Dean of Students. We send several of these cases to the dean every semester.

EXAMS:

- The exams will be closed book/closed notes exams.
- You will be allowed to bring pencils, a calculator, and ONE one-page cheat sheet (8 1/2" x 11", handwritten, both sides) to each exam. This one-page handwritten cheatsheet will be worth 1 point on the exam.
- Exam 1 and Exam 2 will last exactly one hour, with all STAT 301 students taking the exam together in the evening.
- The Final Exam lasts two hours, with the date and time announced later. Do not make travel plans to leave during final exam week until you know when your final exam will be held.
- See the course website for review problems and other exam information.

MAKE-UP EXAMS:

- Valid reasons for missing an exam include university documented absence, illness, and/or a death in your family. Work is not a valid excuse.
- If you must miss an exam due to a class conflict or school trip, you need to print off a "Make-up Exam Form" from the course website, complete the form, and turn it in to your instructor **at least a week in advance** with appropriate documentation stapled to the make-up exam form.
- If you are missing the exam due to an **emergency**, you must **e-mail your instructor AND the course coordinator** with details of your situation and the information requested on the Make-up Exam Form from the course website **no later than 9 am the day after the scheduled exam**.
- Your instructor will need to approve your documentation (university or doctor's note, obituary, etc.) before your exam grade will be recorded.
- Failure to meet these deadlines may result in a score of 0 points for the exam.
- We make every effort to accommodate student schedules while also protecting the integrity and security of the exam. The make-up exam time will be chosen based on the schedules turned in to us by the students who meet the deadline. If you turn in your form after the exam has been scheduled, then you will have to adjust your schedule to the time that has already been chosen. Usually only one make-up exam time will be scheduled following each regular exam.
- No exam will be given earlier than the scheduled time.

SPSS: HOW TO GET IT AND USE IT

There are 4 main ways for you to get SPSS:

1. Every ITaP computer lab has SPSS installed. You get to it by doing: *Start\All Programs\Standard Software\Statistical Packages\SPSS 18.0*

2. Buy your textbook new from a Purdue bookstore. An SPSS Student Version program disk will be included in the shrink-wrapped package.

3. Use SPSS online through ITaP's Software Remote. (Be warned, we have had some problems with this in the past. Make sure you save your work often.) You get to it by going to: https://goremote.ics.purdue.edu/Citrix/XenApp/auth/login.aspx and logging in with your

Purdue username and password. You may have to download some Citrix software to get it to work. This only works for Purdue students.

4. If none of the above methods work for you, you can always purchase the software yourself, but you'll probably have to buy it online. The Student version of SPSS is pretty cheap.

Make sure you can get access to SPSS *during the first week of classes*. Not having access will not excuse you from getting the work done. The first lab, due the first Friday of the semester, requires you to have SPSS. The homework also requires you to use SPSS.

SPECIAL NEEDS:

- If you have been certified by the Office of the Dean of Students as someone needing a course adaptation or accommodation because of a disability OR if you need special arrangements in case the building must be evacuated, please contact your instructor during the first week of classes. You will need to fill out the Academic Accommodations form on the course website.
- If you have a letter from ODOS stating that you may have extra time on the exams or use the testing center, you will also need to turn in a Make-up Exam Form from the course website at least a week before each scheduled exam to let us know your situation. We cannot accommodate the extra time during the regularly scheduled exams, so you will take the exam with the other make-up exam students or in the ODOS testing center. No exam will be given earlier than the scheduled time. If you are taking the exam in the testing center, the exam time should be scheduled for the day following the regularly scheduled exam.

SECTION CHANGES:

In the **first week of classes**, all section changes and adds should be done through the Banner system on your own. The only section changes and adds which will be accommodated after this time are for extreme extenuating circumstances (such as the registrar dropping all of your classes due to delayed financial aid disbursement), and you should then contact the course coordinator, Christa Sorola by e-mail (csorola@purdue.edu). If you change sections, it is YOUR responsibility to print off your grades from your old Blackboard site and give them to your new lecturer within a week of the section change. No student will be allowed in to a section that is already full, and this includes the online section.

GRADES ON BLACKBOARD:

It is your responsibility to make sure the grades recorded on Blackboard are correct. You should also let your lecturer know if you think something was graded incorrectly. However, all of this should be done in a timely manner. (You shouldn't wait until finals week to let us know that you need more points on Lab #1.) All non-final-exam grades in Blackboard (other than the final exam) should be finalized by the last day of classes. Any mistakes or omissions in Blackboard need to be shown to your instructor before then.

COURSE EVALUATION:
During the last two weeks of the semester, you will be provided an opportunity to evaluate this course and your instructors 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.

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

Collaborating or Working in Groups for STAT 301

In STAT 301, 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, and 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 301 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 homework, project, labs, exams, and even group work in class.

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.
- If you are working on a group quiz, everyone should work all of the problems themselves before getting together to talk through their reasoning and decide on the best final answers.
- Ask a tutor or t.a. 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.)
- Attend a group work session without having first worked all of the problems yourself.
- Participate in group work in class without coming to class 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 t.a. work though all (or some) of your HW problems for you.
- Share SPSS work, print off two copies of the output, or two people use the same computer to do SPSS.
- Not keeping your exam covered.

Tips from former STAT 301 students on how to succeed in this course

General suggestions:

- Go to class, go to lab, do your HW, and everything will work out.
- Attend every lecture, and take good notes.
- Always print out the notes and bring them with you to fill out in lecture.
- Bring your lecture notes to lab, and read over your notes before you get to lab.
- Go to lecture.
- Don't skip labs, class, or any assignments. All of the points are valuable, and none should be taken for granted.
- Stay on top of all the class work.
- Go to office hours and help sessions and buddy up with others taking the course.
- Make use of office hours, whether you're only having a little bit of trouble or just not getting any of it.
- Really learn the Normal distribution the first time it is taught. It will only help you in the long run. I know we heard that in class, but it is very true!
- Bring all tables (Normal, t) to class all year. These are always needed.
- Use common sense when approaching statistical problems. Think logically.
- If you don't understand a certain topic, ask someone right away before you get too far behind.
- Don't hesitate or be embarrassed to discuss problems such as learning disabilities, ADD/ADHD, depression, low grades, etc. with instructors. Often, well-informed instructors can offer suggestions regarding exam preparation.

Homework:

- Print out all of your Perdisco feedback when you do the assignment. It's not available later, and you'll need it for studying.
- Don't be afraid to do some of those practice questions in Perdisco before doing the actual homework; they help.
- Do the homework in an ITaP lab. The online version of SPSS is a pain.
- Do HW as soon as you learn the material it covers. Right after you do the lab is a good time. It's really tough when you wait till the due date at 11 pm and have an hour to re-learn and apply!
- Do the HW assignments and put effort into them! I feel as though I adequately know the material now, but if I would have spent the time to learn from the HW, I believe I could have mastered the material.

Exams:

- Make a good cheat sheet for the tests, and use both sides.
- Prepare your cheat sheet early, and do the practice exam questions in the review packets.
- Put examples on your cheat sheet, not just formulas.
- Don't underestimate how much you should study for the exams.
- Don't rely on just your cheat sheet for the exams. You need to know the material even without the cheat sheet.
- As Christa says, make your cheat sheet your "last line of defense." Make sure you know the material in your own head so that you only use your cheat sheet as a last resort during the exam. You may not have enough time to finish the test if you spend a lot of time looking at your cheat sheet.
- Do the exam review packets, the lecturers are not lying; it tells you everything you need to know. Do them with your own cheat sheet.
- Don't over-clutter your cheat sheet, make it organized and simple.