

# Statistics 326

## Introduction to Business Statistics II

Sections A, B, C, D, J – Spring 2010

<b>Instructor:</b>	Dr. P. Caragea	Office: 2409 Snedecor Hall
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<b>Office Hours:</b>	M 11:10am – 12 pm, W 11:10am – 1 pm, <u>or by appointment</u>	
<b>Lecture:</b>	MW 10 – 10:50 am, Gerdin 1148	
<b>Course web page:</b>	WebCT	
<b>Lab Sections:</b>	Section A: R 4:10 – 6pm,	1105 Snedecor, David Rockoff <a href="mailto:drockoff@iastate.edu">drockoff@iastate.edu</a>
	Section B: R 2:10 – 4pm,	1105 Snedecor, Vanessa Kvam <a href="mailto:vkvam@iastate.edu">vkvam@iastate.edu</a>
	Section C: R 12:10 – 2pm,	1105 Snedecor, Joshua Bernhard <a href="mailto:berni@iastate.edu">berni@iastate.edu</a>
	Section D: F 12:10 – 2pm,	1105 Snedecor, Ming Zhou <a href="mailto:zhouming@iastate.edu">zhouming@iastate.edu</a>
	Section J: R 4:10 – 6pm,	1117 Gerdin, Pingshou Zhong <a href="mailto:pszhong@iastate.edu">pszhong@iastate.edu</a>

### Required Materials

1. (Stat226) **Access** to *The Practice of Business Statistics*, Moore, McCabe, Duckworth, and Sclove, First\* or Second Edition.
2. \*Companion Chapters 13 and 14 for *The Practice of Business Statistics*
3. (Stat226) JMP Manual for *The Practice of Business Statistics*
4. (Stat226) calculator (more details follow)
5. (Stat226) stapler (un-stapled lab assignments will result in a 5 pt reduction of the total points earned for that assignment)

### Chapters/sections to be covered (approximate)

Exam 1	Wednesday, February 17th* (evening exam)	10.1–10.2, 11.1–11.3
Exam 2	Wednesday, April 7th* (evening exam)	11.3, 13.1–13.2
Final Exam**	TBA (during Finals week)	14.1–14.2, 4.3, 5.1-5.4 & cumulative over previous material

\* Exam 1 and Exam 2 are from **8 – 10pm** on the scheduled dates, location TBA.

\*\*The Final Exam is *comprehensive* and the exact date and time will be announced **as soon as time and date are set and finalized by the University. The Final Exam could end as late as 2:00 pm on Friday, May 7, 2010, so please plan accordingly.**

### Grading

Final letter grades (on plus/minus scale) are determined from: Final Numeric Grade =  
 $0.10 \times \text{HW}\% + 0.20 \times \text{Labs}\% + 0.18 \times \text{Exam1}\% + 0.18 \times \text{Exam2}\% + 0.34 \times \text{Final Exam}\%$

## Course Information and Policies

**Learning Outcomes:** We will extend and build on simple linear regression techniques discussed at the end of Stat 226 focusing on multiple regression analysis, regression diagnostics, model building as well as applications in analysis of variance and time series. Furthermore, this class will provide you with the opportunity to strengthen not only quantitative skills but also **critical thinking** and **problem solving skills** essential to making intelligent everyday business decisions. Although you may not always be personally required to run statistical analyses in your future professional life, a solid understanding of basic statistical techniques is crucial for any decisions at the managerial level and will give you the opportunity to put yourself at an advantage over your competition.

**Expectations:** We expect you to be open-minded and willing to succeed in this class. It is your responsibility to convince us that you have made sincere effort in approaching and learning the material covered in this course. A minimum of 6 hours per week outside the classroom is required for this class in order to keep up. Your own effort is vital to your success in this class. Neglecting to put in sufficient effort will only make this course unnecessarily difficult.

**Labs** provide a chance for a hands-on approach to the material covered in the lecture. While lectures will focus on concepts, examples, and interpretations, the labs will sometimes also include the more computational aspects of our topics (some to be done by hand, but most to be done by JMP). They provide a chance for you to do Statistics (rather than just hearing about Statistics and/or watching me do Statistics). In addition to practicing basic statistical tools, lab is intended to strengthen your critical thinking about the correct and intelligent use of data.

### General Lab Guidelines:

- Labs are **mandatory** and **cannot be made-up** (neither in advance nor after). The only exceptions to this policy are for *university-sponsored* events with prior approval of the instructor.
- You can only attend your own section's lab (lab rooms have limited seating capacities). One-time requests to attend a different section's lab must be made in writing (using the form on WebCT) to the instructor during the week of the proposed change.
- To be able to complete the lab assignment within the designated 2 hour lab period you will need to come prepared, which means that you will need to review your lecture notes and visit office hours to have any questions answered. There is no time in lab to make-up for missed class periods.
- In order to help you prepare for labs, short open-note WebCT quizzes will be posted each Tuesday at 5pm. The quiz must be completed by 10am Thursday. Your total score on these quizzes will count as one homework assignment.
- Lab instructors are more than willing to help you understand the material **but they cannot and will not** dedicate their entire time to a handful of students trying to catch up on lecture material. The intention is that every lab instructor gets a chance to visit every student at least once during lab.
- You should bring your **completed lecture notes** to lab.
- There will be 12 labs over the course of the semester. There will be a lab every week **except**
  - ▷ week 1 (01/11 – 01/15)
  - ▷ week of Exam 1 (02/15 – 02/19)
  - ▷ week of Exam 2 (04/05 – 04/09)

- There will be a lab during dead week.
- You can **miss up to two labs**; your **two lowest** lab scores (based on overall percentages) will be **dropped**.
- If you are sick or you have ISU related obligations forcing you to miss a lab, **you need to provide proper documentation** so we can find a solution if **these circumstances** require you to miss more than 2 labs.
- You are encouraged to work in groups of 2, but you have to **write up your own answers** and turn in your own assignment.
- Make sure to hand in your lab assignment directly to your lab instructor (this is to avoid **lost** assignments).
- Graded labs will be returned in lab within one week. Check your lab score on WebCT and approach your Lab TA immediately if a score did not get reported correctly.

**Homework Assignments** will be assigned and collected weekly. They are intended as a final self-check that you can master course material on your own without the immediate help of others. They often will not just cover current material but also material from any of the past weeks in preparation of upcoming exams.

- Assignments will be due at the end of class on the specified date.
- You can **miss up to two homework assignments**; your **two lowest** scores (based on overall percentages) will be **dropped**.
- Late submissions will be penalized with a 20% deduction of the maximum possible points for every additional day late. If you are unable to come to class for any reason you are responsible for making arrangements to turn in the assignment in time.
- Late submissions can only be handed in personally to the instructor.
- Homework assignments will be graded within one week and scores posted on WebCT.

A **JMP and a Homework Help Room** are located in Snedecor Hall. 1404 Snedecor is tentatively scheduled to serve as the Stat 326 Homework Help Room. Adjacent to this room will be the JMP Help Room in 1207 Snedecor. Be aware that the TA scheduled to hold office hour might be helping a student in the JMP Help room next door if you cannot find them in the Homework Help Room. A schedule with office hours will be posted at the end of the first week on WebCT. Help will be provided for any questions related to the lecture material, homework problems, and JMP. Questions are welcome but serious effort is expected before seeking help.

A weekly **Help Session** will be offered by one of the Section TAs. During this help session you can ask questions related to the material covered in class as well as Lab and Homework Problems. This session will not provide a review of the material covered during class and therefore is not suitable to replace missed classes. The exact time and location will be announced on WebCT by the end of the first week.

**Exams** will be given according to the assigned dates provided on this syllabus.

- Statistics has two components: **calculation** and **interpretation**, and you are responsible for both components on an exam. In order to receive full credit for a calculation, one must **show the work** that led to the calculation *and* have the **correct answer**. In order to receive full credit for an interpretation, one must use **complete sentences, proper grammar, and correct spelling of words** and **communicate your thoughts clearly**. Approximately half of all exam points are calculation-based and half are interpretation-based.
- Exams will also contain some True/False, Multiple Choice, and Short Answer questions.
- Exam 1 and Exam 2 are evening exams. If you have a class conflict (i.e., you are registered for another ISU class at the time of the exam and can provide documentation), please let me know within the first two weeks of classes. We will make arrangements for you to take the **Make-Up exam** at a different time.
- If, for some other legitimate and documentable reason, you cannot take the exam at the scheduled time and place with the rest of the class, then you should contact me **before** the scheduled exam time. At my discretion, I will we allow you to take the Make-Up exam at a designated time. Once the Make-up exam is graded you are allowed to look at the graded exam in the presence of one of the STAT 326 instructors. Graded Make-Up exams will not be returned to students.
- **Formula Sheets** (if necessary) will be provided for each exam.

I am sometimes approached by students having poor performance on exams in spite a good performance in lab and on homework assignments. Working in groups is intended to stimulate learning from each other, i.e., to exchange ideas and understanding of the class material to supplement your own understanding. This can only be successful for all individuals involved if all participate equally. If you feel that you are working with someone who has a better understanding of the class material, benefit from this by asking all the questions you have. You should still run most of the analyses yourself – don't sit back and watch – being successful in Statistics requires active, not passive learning!

## Miscellaneous

- An appropriate **calculator** for this class should do two-variable statistics (and the financial functions you will need later in your business program). Programmable calculators may be used, but any efforts to program formulas, text, etc. into them for use on an exam will be considered academically dishonest and treated according to university policy. *The instructor reserves the right to clear the memory of selected calculators during exam times.*
- During exams, the only personal items that you will be permitted to have with you at your seat are your calculator and pen/pencil. All other items will be left at the front of the testing room, so I would encourage you to think carefully about what you bring with you. Any exceptions to this policy (e.g., an asthma inhaler) must be negotiated with the instructor in advance.
- Your **attendance** to each class (listening) and your genuine effort on the homework projects, labs, and exams (doing) are two of the most important factors affecting your success in this class. Statistics requires both listening and doing. Feel free to ask me about problems after you have honestly tried—*my office hours are for you.*
- **Academic Dishonesty.** This class will follow Iowa State University policy on academic dishonesty found in the Iowa State University Catalog. A score of zero will be given for the entire assignment or exam in which the academic dishonesty occurred.

- **Disability-Accommodation.** Iowa State University complies with the Americans with Disabilities Act and Sect 504 of the Rehabilitation Act. If you have a documented disability and anticipate needing accommodations in this course, please contact me within the first two weeks of the semester. Retroactive requests for accommodations will not be honored. Please have Disability Resources Office, located in Room 1076 on the main floor of the Student Services Building complete a SAAR form verifying your disability and specifying the accommodations you will need for this course. Their telephone number is 515-294-6624, TDD 294-6335. You will need to present this form to me.

This syllabus is subject to change.