PREREQUISITES:
You should not be registered for this course if you have not successfully passed and retained a functional knowledge of Statistics 133 or equivalent course. The present course is a continuation of Statistics 133. In addition, C.I.S. 200 is a prerequisite.

COURSE OBJECTIVES:
The overall objective of the course is to familiarize you with the use of statistical procedures for the purpose of generating decision-making information from data. The following ideas will be discussed:

- Problem identification and formulation.
- Model selection and use. The Normal and Binomial models will be stressed because of their general applicability. They will be used for assessing the probability of specified events, setting confidence intervals, and conducting hypothesis tests.
- Interpretation of the results of a statistical analysis. Proper selection of the model, accurate measurement, and a correct analysis are necessary but not sufficient for the solution of management problems. The final and most important step is the interpretation of the results of the analysis. What should the manager do given the statistical results? What kinds of mistakes might result from this course of action?
PROCEDURES:

The following procedures will be followed to achieve these objectives:

- **Lectures:** In general, lectures will follow the course outline and the text. Complete the assigned reading before the class session. As such, the lectures will attempt to focus on the more difficult course material.

- **Class Attendance:** Attendance at all class sessions is **REQUIRED**. An attendance sheet will be passed around every class. Organize your personal affairs to allow for attendance at every class session. You are responsible for all announcements and assignments made in class by your instructor. Be warned that any additional assignments made in class will be used in determining the letter grade distribution at the end of the quarter. If you miss such assignments, your relative course grade is likely to suffer.

- **MINITAB Computer Exercises:** Learning theory and techniques are necessary but not sufficient for statistical analysis. Applied statistics requires the manager to understand statistical software. The **MINITAB** statistical package will be used to develop these skills in the course. You may have up to five graded computer assignments. The computing assignment must be submitted in-person by each individual student at the beginning of the designated class time. Late assignments will not be accepted.

- **Homework:** Practice is essential in learning the material covered in this course. Answer keys for the homework assigned in the Lecture Notes are posted in the class web page.

- **Course Grading:** Your course grade will consist of the following components:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points Each</th>
<th>Total Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>MININTAB Assignments (5)</td>
<td>6</td>
<td>30</td>
<td>15%</td>
</tr>
<tr>
<td>Quizzes (2)</td>
<td>20</td>
<td>40</td>
<td>20%</td>
</tr>
<tr>
<td>Recitation Attendance</td>
<td></td>
<td>10</td>
<td>5%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>60</td>
<td>60</td>
<td>30%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>60</td>
<td>60</td>
<td>30%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td><strong>200</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

  The points and percentages are approximate. Your instructor may add quizzes or other assignments at their discretion.

  The examinations are **not** explicitly cumulative.

  - Quiz #1 will cover Lectures #1 through #3
  - The Midterm Exam will cover Lectures #1 through #7.
  - Quiz #2 will cover Lectures #8 through #11
  - The Final Exam will cover Lectures #8-#15.

  Questions about this syllabus may appear on the exams.

- **Examinations:** The exams in this course are **closed book**. Students may bring a **formula page** for all quizzes and exams. The sheet is to be **one page** (8 ½ x 11 inches) of notes and formulas for the exam. Both sides of the page may be used. It is imperative that you also bring the following to each exam:

  **Calculator** --- It is the **student’s** responsibility to bring a functioning calculator to each exam. The instructor will not provide a replacement calculator nor will students be allowed to share calculators during an exam. **PDA’s and cell phones are not permitted to be used as calculators during exams.**

  **Computer output** as indicated by your instructor.

  NO MAKEUP EXAMS OR INCOMPLETE GRADES WILL BE GIVEN! IF YOU CANNOT ATTEND LECTURES AND TAKE THE EXAMS, DROP THE COURSE NOW. Any exam that is missed will automatically receive a score of zero (0).

- **Disability Accommodations:** If you need an accommodation based on the impact of a disability, arrange an appointment with the instructor as soon as possible.

- **Examination Materials:** Exam answer forms or other material as appropriate will be held for students to pick up for **two** quarters after the final exam.
• **Academic Misconduct:** Your instructor and the Management Sciences Department expect professional and ethical behavior at all times but particularly on assignments and examinations. I have found that most students are honest and do their own work and that they appreciate knowing that we take academic misconduct very seriously. The Management Sciences Department and the University have standard procedures for those who choose not to behave ethically. My personal advice to your on this whole delicate subject is **Don’t cheat and don’t give the appearance of cheating**.

**GRADE NOTIFICATION POLICIES:**

In accordance with the 1974 Family Educational Rights and Privacy Act, the following policies dealing with grades have been adopted:

• Student grades earned in the course (individual assignment / case study / exam grades and final grades) will not be posted in any public place including bulletin boards and/or web sites.

• Student grades earned in the course (individual assignment / case study / exam grades and final grades) will not be discussed over the phone as the identification of the student cannot be established with certainty and confidentiality may be violated.

• Student grades earned in the course (individual assignment / case study / exam grades and final grades) will not be discussed using electronic media including personal (non-OSU) e-mail as the identification of the student cannot be established with certainty and confidentiality may be violated.

• Student grades earned in the course (individual assignment / case study / exam grades and final grades) may be discussed using electronic media through the student’s authorized OSU e-mail account at the discretion of the professor. It is the responsibility of the student to keep the confidentiality of correspondence through their OSU e-mail account.

• The preferred method for discussion of student grades is in person. Appointments to discuss grades can be made by calling my office or by stopping in my office during office hours posted for present or subsequent terms.

• Student grades earned by a student will only be discussed with that student. Student grades for other classmates will not be discussed and/or distributed.

• Student assignments and exams during the term will not be distributed to the students to keep but will be stored for a minimum of two quarters to be used as a basis to rectify any and all grade disputes. Student requests to examine stored assignments or exams must be made in writing to allow for the collection of requested materials from the files.

If a student feels that a mistake was made in the determination of the final grade, that student may petition in writing (or through e-mail) for a recalculation of the grade. The individual assignment / case study / exam grades will be verified and the final grade recalculated; the student will be notified of the results of the recalculation.

**MAIL:**

If I am not in my office, **DO NOT** slide papers, assignments, etc. under my office door. During the day, please give all papers, assignments, etc. to the receptionist in the Management Sciences office (600 Fisher Hall) to put into my Management Sciences mailbox. If the Management Sciences office is not open, put all papers, assignments, etc. in my Fisher College mailbox in 045 Fisher Hall.

**E-MAIL:**

Due to the number of computer viruses received during the past two semesters, the following criteria for e-mail has been established:

• Do not use the mail function in Web-CT.

• E-mail subject line must begin with **“MgtSci 330”** followed by the student's last name.

• E-mail not conforming to the above will not be read.

• Any e-mail received that contains a virus will drop the student’s final grade by one letter grade for each occurrence.
MINITAB ASSIGNMENTS

Turn in your printed MINITAB computer analysis for the following problems at the beginning of the class on the date indicated on the assignment.

Format for assignments

• Neat / Professional
• Stapled
• Any references to the computer output must be annotated (circled, highlighted, etc.) on the computer output
• Hand in the following:
  • Cover page (see Web-CT) with your name and questions answered in the boxes provided
  • MINITAB output (session window)

You must answer all parts of the questions to receive full credit.

Assignments turned in after the beginning of the class will receive a score of zero (0). **NO EXCEPTIONS!**

MINITAB #1: Textbook Problem 10.54 (Page 313) and Problem 11.51 (Page 340)

MINITAB #2: Textbook Problem 12.43 (Page 366) and Problem 13.38 (Page 409)

MINITAB #3: Textbook Problem 15.17 (Page 485) and Problem 13.38 (Page 409) using ANOVA

MINITAB #4: Textbook Problem 18.12 (Page 615) and Problem 18.27 (Page 627)
Include a scatter plot for the data that shows the fitted regression line.

MINITAB #5: Textbook Problem 19.4 (Page 673) and Problem 22.38 (Page 778)
<table>
<thead>
<tr>
<th>Day / Date</th>
<th>Topic</th>
<th>Reading Assignment</th>
<th>Homework Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday, January 4(^{th})</td>
<td>Summation Notation</td>
<td>Normal Probability Distributions</td>
<td>Chapter 8</td>
</tr>
<tr>
<td>Thursday, January 6(^{th})</td>
<td>Sampling Distributions</td>
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<tr>
<td>Tuesday, January 11(^{th})</td>
<td>Point and Interval Estimation</td>
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<tr>
<td>Thursday, January 13(^{th})</td>
<td>Review / Quiz #1</td>
<td></td>
<td></td>
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<tr>
<td>Tuesday, January 18(^{th})</td>
<td>Confidence Interval and Hypothesis Testing I</td>
<td>11.1 – 11.3</td>
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<tr>
<td>Thursday, January 20(^{th})</td>
<td>Hypotheses Testing II</td>
<td>11.4 – 11.5</td>
<td>12.1 – 12.3</td>
</tr>
<tr>
<td>Tuesday, January 25(^{th})</td>
<td>Hypotheses Testing III</td>
<td>12.4 – 12.5</td>
<td>13.1 – 13.4</td>
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<tr>
<td>Thursday, January 27(^{th})</td>
<td>Hypotheses Testing IV</td>
<td>13.4</td>
<td>13.6 – 13.7</td>
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<tr>
<td>Tuesday, February 1(^{st})</td>
<td>Review</td>
<td></td>
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<tr>
<td>Thursday, February 3(^{rd})</td>
<td>Midterm Exam</td>
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<td>MINITAB #2</td>
</tr>
<tr>
<td>Tuesday, February 8(^{th})</td>
<td>One-way ANOVA</td>
<td>15.1 – 15.3</td>
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<tr>
<td>Thursday, February 10(^{th})</td>
<td>One-way ANOVA</td>
<td>15.1 – 15.3</td>
<td>15.7</td>
</tr>
<tr>
<td>Tuesday, February 15(^{th})</td>
<td>Linear Regression I</td>
<td>18.1 – 18.5</td>
<td>MINITAB #3</td>
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<tr>
<td>Thursday, February 17(^{th})</td>
<td>Linear Regression II</td>
<td>18.5 – 18.10</td>
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<tr>
<td>Tuesday, February 22(^{nd})</td>
<td>Multiple Regression</td>
<td>19.1 – 19.4</td>
<td>MINITAB #4</td>
</tr>
<tr>
<td>Thursday, February 24(^{th})</td>
<td>Review / Quiz #2</td>
<td>20.1 – 20.3</td>
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<tr>
<td>Tuesday, March 1(^{st})</td>
<td>Time Series Analysis</td>
<td>Chapter 21</td>
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<tr>
<td>Thursday, March 3(^{rd})</td>
<td>Quality Control I</td>
<td>Chapter 22</td>
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<tr>
<td>Tuesday, March 8(^{th})</td>
<td>Quality Control II</td>
<td>Chapter 22</td>
<td></td>
</tr>
<tr>
<td>Thursday, March 10(^{th})</td>
<td>Review</td>
<td></td>
<td>MINITAB #5</td>
</tr>
<tr>
<td>Tuesday, March 15(^{th})</td>
<td>Final Exam (7:30am to 9:18am)</td>
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</table>
How to earn A's

Attend every class
Attend every class on time
Know your teachers' names (and how to spell them!)
Sit up front
Do homework after every class
Hand in assignments on time
Refer to your syllabus frequently
Visit teachers during office hours
Acknowledge your teachers when you see them on campus
Take good notes
Review your class notes after every class
Review your class notes before every class
Take all the time given for tests
Ask one question every class

How to earn B's

Miss no more than 4 class
Talk to teachers to explain all absences
Attend classes on time
Sit up front
Take good notes
Review your class notes after every class
Visit teachers during office hours
Hand in assignments on time
Keep your syllabus with your class notes
Take all time given for tests

How to earn C's

Miss more than 4 classes
Be late to many classes
Be confused about your teachers' names
Hand in assignments late
Forget where you "filed" your syllabus
Take incomplete class notes
Sit toward the back of the room
Rush through tests

How to earn D's and E's

Miss more classes than you attend
Don't know your teachers' name
Never visit your teachers during office hours
Miss assignments
Hand in assignments late
Lose your syllabus
Sit in the back of the room
Don't take notes
Rely on others for notes
Use one notebook for more than one class's notes

Another clue to earning better than average grades is to take responsibility for your own academic performance. This means at the end of the quarter when you are inquiring about your grades, DON'T ASK: "What did the teacher give me?" rather DO ASK: "What did I earn?"

Remember, your grades are a reflection of your work and your effort.