

Course:	STAT 332 STATISTICS II 4 Credit Hours
Term:	Spring 2012
Instructor:	Name: Francis Mozu Email Address: fmozu@wilberforce.edu Phone Number: 9379027748
Catalog Description:	An analysis of advanced statistical techniques including parametric and non-parametric hypothesis testing, the Chi- Square distribution, analysis of variance, simple linear, non-linear, and multiple regression; index numbers, and modern decision theory.
Prerequisites	STAT 231; MAT 121
Course Level Learning Outcomes:	<p>A student who passes this course with a grade “C” or better would have acquired a fundamental understanding of:</p> <ul style="list-style-type: none"> • The nature of statistics and the role it plays in various kinds of decision making; • The difference between descriptive and inferential statistics; • Large sample tests of hypothesis, Type I and Type II errors and statistical power, one and two- tailed tests, p-value tests involving means and proportions; • Inferences from small samples, student’s t test. Use of statistical tables; • Analysis of Variance • Bivariate linear regression and correlation analysis;

	<ul style="list-style-type: none"> • Time Series analysis and forecasting-moving average models, weighted moving averages, qualitative models including panel surveys; • Survey sampling-bias and error, stratified samples, cluster samples, systematic sampling and non-random sampling; • Indexes used in economics and business such as Laspeyres Price Index, CPI. • Statistical Quality Control in manufacturing
Materials:	<p>REQUIRED TEXTBOOK Business Statistics: A Decision –Making Approach Eighth Edition David F. Groebner (& others) Publisher: Pearson Prentice Hall ISBN 10: 0-13-612101-2</p> <p>Hand-held calculator</p>
Grading:	<p>Grading Scale</p> <p>90 - 100% = A 80 - 89% = B 70 - 79% = C 60 - 69% = D Below 60% = F</p> <p>Show how students will earn each grade based on projects, labs, attendance, class participation and exams.</p> <p>Assignments (8): 400 points (40%) Tests (4): 400 points (40%) Attendance 50 points (5%) Final Exam 150 points (15%)</p>

	<p>A student's proficiency in course work is measured in terms of the following Alphabetical symbols. Minuses and pluses are not accepted.</p> <p>A: Excellent</p> <p>B: Good</p> <p>C: Satisfactory (Grade C or better required in major courses).</p>
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	<p>D: Poor (passing, except in major courses).</p> <p>F: Earned Failure. (Removed only by repeating the course). Upon successfully passing the course, the first grade is “excluded” from grade point average. The second grade is “included in the recalculation of the grade point average.</p> <p>I: Incomplete (student performing satisfactorily, but unable to complete coursework due to valid reason).</p> <p>N: Used in cases where grades are not yet submitted.</p> <p>W: Withdrew before course drop deadline.</p> <p>WP: Student withdraws from University. Withdrew passing after course drop deadline (2 weeks after mid-term).</p> <p>WF: Student withdraws from University. Withdrew failing after course drop deadline (2 weeks after mid-term. WF is treated as an F (punitive grade).</p> <p>CR: Credit/pass</p> <p>NC: No credit/fail</p> <p>Z: Failed course for non-attendance/unofficial withdrawal (treated the same as an F grade). Last date of attendance is reported by faculty.</p>
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Activities:	<p>Assignments (8)</p> <p>Tests (4)</p> <p>Attendance</p> <p>Final Exam</p>
Policy Statements:	<ul style="list-style-type: none"> • Students are expected to attend classes regularly and punctually

	<p>and to leave only when class is concluded. According to university regulations the instructor may reduce the course grade when the student has more than 3 unexcused absences during the semester.</p> <ul style="list-style-type: none"> • Students are expected to participate in all assignments and exams. • Students should take notes, contribute to progress of the class and not cause distractions. • Students must be prepared for each class by reading assigned chapters and reviewing course notes.
<p>University Policies:</p>	<p><u>Academic Honesty:</u> Plagiarism and cheating are completely unacceptable in an institution of higher education and learning. Such behavior deprives the student involved of the desired education and development of an appropriate value system. It is extremely unfair to other students, and it severely diminishes the value and integrity of a University degree.</p> <p>Plagiarism occurs whenever another's work is submitted as one's own. This includes the use of information from an Internet site or from a published author's ideas and words without proper attribution or documentation. It also includes the copying of term papers, other unpublished works, homework, case reports, computer programs and spreadsheets, and any other course assignments which are submitted for course credit as the student's own effort.</p> <p>Each instructor shall state the specific penalties for plagiarism and cheating in the course syllabus. The instructor has final responsibility for assessing the penalty in such cases regarding the course grade.</p>

	<p>All cases of plagiarism and cheating will be referred to the Vice President for Academic Affairs for possible further action. Additional penalties may be imposed for the egregious cases of plagiarism and cheating.</p>
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Drops and Withdrawals

Dropping Courses:

A course may be dropped up through the end of the second week of the semester without any record on the transcript. After this date, a course may be dropped up to two weeks after mid-term grade reports are due, with a **W** appearing on the transcript. Withdrawals after mid-terms must be approved by the Vice-president of academic Affairs.

In certain General Studies core courses, students' assignments to course sections may be changed by faculty with written notification given to the Registrar. In all other cases, a student wishing to move from one section of a course to another must accomplish this by using a drop-add form to drop the old section and add the new section.

Withdrawal/Grading Policies

The following procedures will apply to all students withdrawing from the University. Grades will be given in regard to the time of withdrawal. Contact the Registrar's Office for forms and assistance.

- **W** (official withdrawal initiated by the student): To be given when a student withdraws between the first day of class/registration and the last day to drop courses, this is two weeks after mid-term exams.
- **AW** (unofficial withdrawal not initiated by the student): The student does not inform anyone that he/she is leaving campus (the student walks out). The university may also administratively withdraw a student for disciplinary reasons, academic legal anytime during the semester.

Special Accommodations:

A student who is ill or who has or develops medical conditions including but not limited to illness, physical or other disability or pregnancy must notify the Director of Health Services immediately.

<p><u>Classroom Conduct:</u> State your requirements about cell phone use, text messaging and other related technology in your class. Include your expectations about class interruption, disruption and inconsiderate behavior.</p> <p><u>Contact Hours:</u> Specify all classes meet for the full-time stated on schedule. Classes cannot be shortened or cancelled without prior permission. Cancelled classes must be rescheduled.</p>	<p>Use of cell phones in the classroom is prohibited. Class interruption, disruption and inconsiderate behavior will not be tolerated.</p> <p>MTWR 10.00am – 10.50 am King 207</p>												
<p>Course Policies :</p>	<p>Students must prepare well for any assessment by practicing answering questions in their study. All assignments must be completed by the due date.</p>												
<p>Weekly Schedules:</p> <p>WEEK I & 2: 1/5/2012</p> <p>WEEK 3 & 4</p> <p>WEEK 5 & 6</p>	<table border="0"> <thead> <tr> <th style="text-align: left;">TOPIC</th> <th style="text-align: right;">CHAPTER</th> </tr> </thead> <tbody> <tr> <td>Review of Basic Statistics, Normal Distribution and Central Limit Theorem.</td> <td></td> </tr> <tr> <td>INTRODUCTION TO HYPOTHESIS TESTING Large Sample Tests of Hypothesis: Means and Proportions, Statistical significance, Types of Errors</td> <td style="text-align: right; vertical-align: bottom;">9</td> </tr> <tr> <td>HYPOTHESIS TESTING: Estimation for Two Population Means and Proportions, Inferences from small samples, Student t-test.</td> <td style="text-align: right; vertical-align: bottom;">10</td> </tr> <tr> <td>TEST #1 (Chapters 9 & 10)</td> <td></td> </tr> <tr> <td>HYPOTHESIS TESTING: Estimating for a Single Population Variance; Inferences from small samples student's t test; Chi Square Test; F-distribution.</td> <td style="text-align: right; vertical-align: bottom;">11</td> </tr> </tbody> </table>	TOPIC	CHAPTER	Review of Basic Statistics, Normal Distribution and Central Limit Theorem.		INTRODUCTION TO HYPOTHESIS TESTING Large Sample Tests of Hypothesis: Means and Proportions, Statistical significance, Types of Errors	9	HYPOTHESIS TESTING: Estimation for Two Population Means and Proportions, Inferences from small samples, Student t-test.	10	TEST #1 (Chapters 9 & 10)		HYPOTHESIS TESTING: Estimating for a Single Population Variance; Inferences from small samples student's t test; Chi Square Test; F-distribution.	11
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WEEK 7 & 8	ANALYSIS OF VARIANCE (ANOVA) 12 TEST #2 / MIDTERM TEST (Chapters 11 & 12)
WEEK 9: 3/5 – 3/9	SPRING BREAK
WEEK 10 & 11	GOODNESS-OF-FIT TESTS & CONTINGENCY ANALYSIS 13
WEEK 12 & 13	INTRODUCTION TO LINEAR REGRESSION AND CORRELATION 14 Test 3 (Chapters 13 & 14)
WEEK 14 & 15	ANALYZING AND FORECASTING TIME-SERIES DATA 16 Index Numbers
WEEK 16	QUALITY AND STATISTICAL PROCESS CONTROL 18 Test 4 (Chapters 16 & 18)
WEEK 17	REVIEW
WEEK 18 (4/27 – 5/3)	FINAL EXAM
Advising & Tutorial Support:	Walker 207 MTWF 11.00am – 1.50am Other times by appointment.