ORS 5310
STATISTICAL DECISION ANALYSIS

Spring 2015

INSTRUCTOR: Joseph S. Mollick PhD  OFFICE HOURS: TWRF 8-9:30a.m.
OFFICE: OCNR 389
OFFICE PHONE: 825-2853 (no appointment necessary to meet during office hours)
E-mail: joseph.mollick@tamucc.edu
Course website: https://bb9.tamucc.edu/

DESCRIPTION:

A study of descriptive statistics, probability distributions, the normal distribution, confidence intervals and hypothesis testing, analysis of variance, and regression analysis.

COURSE PREREQUISITES:

Prerequisite: MATH 1314 and MISY 2305 or equivalents and graduate standing


COURSE OBJECTIVES:

1. You will enhance your knowledge of quantitative concepts and skills.
2. You will develop an understanding of key statistical concepts used in business.
3. You will learn basic statistical methods of data analysis, founded in probability theory.
4. You will draw statistical inferences using the results obtained by the application of basic statistical methods.
5. You will apply basic statistical methods to data with the help of the statistical applications found in Microsoft Excel.

EXPECTATIONS OF STUDENTS:

1. You are responsible for all materials and assigned readings.
2. You are responsible for turning in all assignments or projects on time.
3. You are responsible for staying informed of assignments, meeting locations, and any changes to the syllabus announced online.
4. You are responsible for doing everything necessary to learn statistics.
5. You are responsible for knowing and abiding by the rules and policies outlined in this syllabus.
INSTRUCTIONAL METHODOLOGY:

Regular attendance and participation in activities in class on campus and online are expected. You are encouraged to ask questions and to participate in discussions on statistical methodologies and their applications. In addition, you are encouraged to pay attention to commercials, news items in printed as well as audio-visual media and scholarly journal articles to become aware of the wide use of statistics.

EXAMS:

Your performance will be evaluated on two examinations and other forms of assessment. The exam formats will generally be multiple choice, short answer and problems. Lectures, readings, discussions, class activities, and suggested homework problems will be the basis of these exams. Many of the questions will be similar to questions for review and discussion. Rather than being purely numerical, problems will be presented in word format. The exams will have to be completed on the due date specified in the schedule.

How to prepare for the exams? Study the chapter in the book and the PowerPoint slides posted at the website. Practice solving the suggested practice problems for each exam. Practice answering the practice quizzes posted at your class website.

MAKEUP EXAMS:

Exams are not to be missed for the convenience of the student. You are expected to schedule other activities around the class exam dates. Any exam or class activity missed without a pre-approved excuse will be assigned a grade of ZERO.

SUGGESTED STUDY QUESTIONS:

It is the student’s responsibility to work the suggested study questions, exercises, and problems posted at the class website. This is how quantitative topics are learned, through practice. Each student is expected to be able to use the spreadsheet software Excel to use tools for producing charts, tables, descriptive statistics, regression and other data analysis tools. Some help on how to use Excel is available in an appendix at the end of each chapter in the textbook.

GRADING:

Your grade in this course will be based on your performance on two exams, and the data analysis project summarized in a research paper and class participation activities. The two exams will account for 300 points each and the research project will account for 200 points. Attendance, class participation, discussions, quizzes and other activities will account for 200 points. Course grade will be determined on a 1000-point scale. PERCENTAGES ARE NOT USED IN GRADING IN THIS COURSE. IF YOU WANT A PARTICULAR LETTER GRADE YOU MUST EARN THE MINIMUM NUMBER OF POINTS FOR THAT LETTER GRADE. For example, for a letter grade of “A” you must earn at least 900 points (in other words 899 points IS NOT an “A”, 899 points IS a letter grade of “B”).
ACADEMIC INTEGRITY/PLAGIARISM:
University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class, determination of academic misconduct or complicity in an act of academic misconduct on an assignment or test will be up to the professor.

STUDENTS WITH DISABILITIES:
The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call or visit Disability Services at (361) 825-5816 in Corpus Christi Hall (CCH) 116.
If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.

DROPPING A CLASS:
I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with me before you decide to drop to be sure it is the best thing to do. Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. April 10, 2015 is the last day to drop this class with an automatic grade of “W” this term.

CLASSROOM/PROFESSIONAL BEHAVIOR:
Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

GRADE APPEALS:
As stated in University Rule 13.02.99.C2, Student Grade Appeals, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University
Rule 13.02.99.C2, Student Grade Appeals, and University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules Website at http://www.tamucc.edu/provost/university_rules/index.html. For assistance and/or guidance in the grade appeal process, students may contact the Office of Student Affairs.

INSTRUCTOR STATEMENT:

It is my intention to devote the time, effort, and resources to properly instruct each student, and the class as a whole, in the course subject matter and industrial applications in general. I encourage you to devote the time and effort necessary to succeed in this course. The material in this course is cumulative in the sense that one concept or procedure is built on top of another. Hence, you should strive to keep up with the material and not fall behind.

I encourage you to participate in all aspects of the learning process.

Best wishes for your success in the class.

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GENERAL COMMENTS:

1. Doing the assignments is essential to succeeding in this course. You are encouraged to keep up with the suggested homework practice problems and check the answers provided in Appendix D at the end of the textbook.

2. You should not hesitate to ask questions via e-mail but remember the limitations of online communication when you ask a question or try to answer a question posted by others in a discussion forum. Please, remember your e-mail may not be answered during weekends or in the middle of the night. Ask your question ahead of time and do not expect the instructor or other students to be online 24 hours per day 7 days a week. However, the instructor can be expected to answer your questions during scheduled office hours.

The class schedule published with this syllabus has been prepared to serve as a guide for the semester. Adjustments may be made to this schedule as necessary. As we progress, the instructor may highlight some topics and subtopics in certain chapters more than others. A list of practice problems and the data sets are posted at the class website especially for those who did not get a CD with the textbook.
Tentative Class Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Topic</th>
<th>Chapter, Section</th>
<th>Discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-Jan</td>
<td>W</td>
<td>Introduction to Course; Data and Statistics</td>
<td>1.1-1.5</td>
<td>Ice-breaker</td>
</tr>
<tr>
<td>28-Jan</td>
<td>W</td>
<td>Descriptive Statistics: Tabular and Graphical Presentations</td>
<td>2.1-2.2</td>
<td>Discussion 1</td>
</tr>
<tr>
<td>4-Feb</td>
<td>W</td>
<td>Descriptive Statistics: Numerical Measures</td>
<td>3.1 -3.3 and 3.5</td>
<td>Discussion 1</td>
</tr>
<tr>
<td>11-Feb</td>
<td>W</td>
<td>Introduction to Probability</td>
<td>4.1 to 4.4</td>
<td>Discussion 1</td>
</tr>
<tr>
<td>18-Feb</td>
<td>W</td>
<td>Discrete Probability Distributions</td>
<td>5.1 to 5.3</td>
<td>Discussion 1</td>
</tr>
<tr>
<td>25-Feb</td>
<td>W</td>
<td>Continuous Probability Distributions</td>
<td>6.2</td>
<td>Discussion 1</td>
</tr>
<tr>
<td>4-Mar</td>
<td>W</td>
<td>Test 1 (covering chapters 1-6)</td>
<td></td>
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<tr>
<td>11-Mar</td>
<td>W</td>
<td>Sampling and Sampling Distributions</td>
<td>7.1 to 7.6</td>
<td>Discussion 2</td>
</tr>
<tr>
<td>18-Mar</td>
<td>W</td>
<td>March 16-20, Monday-Friday Spring Break; No Class</td>
<td></td>
<td>Discussion 2</td>
</tr>
<tr>
<td>25-Mar</td>
<td>W</td>
<td>Interval Estimation</td>
<td>8.1 to 8.3</td>
<td>Discussion 2</td>
</tr>
<tr>
<td>1-Apr</td>
<td>W</td>
<td>Hypothesis Tests</td>
<td>9.1 to 9.4</td>
<td>Discussion 2</td>
</tr>
<tr>
<td>8-Apr</td>
<td>W</td>
<td>Simple Linear Regression</td>
<td>12.1-12.3 and 12.5</td>
<td>Discussion 2</td>
</tr>
<tr>
<td>15-Apr</td>
<td>W</td>
<td>Multiple Regression</td>
<td>Chapter 13</td>
<td>Discussion 2</td>
</tr>
<tr>
<td>22-Apr</td>
<td>W</td>
<td>Multiple Regression</td>
<td>Chapter 13</td>
<td>Discussion 2</td>
</tr>
<tr>
<td>29-Apr</td>
<td>W</td>
<td>Submit/Present Data Analysis Research Project in Class;</td>
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<td></td>
<td></td>
<td>Final Exam (Comprehensive) 7:15 p.m. – 9:45 p.m. May 13</td>
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STATEMENT OF UNDERSTANDING OF THE REQUIREMENTS OF ORMS 5310

I have read the above syllabus and agree to abide by the class policies and procedures set forth therein.

I understand that I must earn at least the minimum required number of points listed in the syllabus to achieve my desired letter grade.

I understand that I am solely responsible for my own work in this course (In other words, I will not turn-in someone else’s work as my own).

I understand that academic dishonesty will not be tolerated in this course.

I understand that I am responsible for asking for any necessary clarification to the requirements listed in the course syllabus.

I understand ALL of the other written requirements in this syllabus for this course that have not been reiterated on this page.

I understand that I must sign/date this page and hold on to it until the end of the semester.

Signed this the __________ day of ______________, 2015.

Print your name: _______________________________________

Signature:  ____________________________________________