 **XAVIER UNIVERSITY OF LOUISIANA**

Division of Business

1 Drexel Drive • Box 52

New Orleans, Louisiana 70125-1098

(504) 520-7505 • FAX (504) 520-7900

**Quantitative Analysis**

**BSAD 3055 Credit:** 3 Semester Hours

**Section I:** 10:50-12:05 **Room**: Xavier South 345

**Instructor:** Dr. Syed Adeel Ahmed

**Office:**  340 L

**Phone:** 520-5038

**Email:** [sahmed1@xula.edu](mailto:sahmed1@xula.edu) or [drsyedadeelahmed@yahoo.com](mailto:drsyedadeelahmed@yahoo.com)

Office Hours: MWF: 9:50 AM -11:40 AM

T and R: 10:35 AM-10:50 AM

**And by appointment**

**Required Text#1**: Render, Stair, Hanna and Hale, *Quantitative Analysis for Management, 12*th edition, Prentice-Hall, 2015. ISBN#13:9780-13-350733-1

**Required Text#2: Title:** Business Statistics **plus MyStatLab Access Card Package  
Author: Robert A. Donnelly (Latest Edition)  
ISBN: 978-1269538152**

**Course Description:** An introduction to the concepts of various quantitative methods such as Decision Analysis, Forecasting, Linear Programming, Inventory Management, and Project Scheduling and their role in the decision making process. Prerequisite: ECON2070.

**Course Objective:** To provide students with a conceptual understanding of the role that quantitative methods play in the decision making process. During the course, students will learn a number of quantitative techniques that have been developed over the years and their application to “real world” business problems.

Objective 1: To learn the concept of problem solving and decision making.

Objective 2: To learn the concepts of random variables and probability distributions and their use in solving business problems.

Objective 3: To learn a variety of quantitative techniques used in the business world.

Objective 4: To apply the concepts learned in a number or projects/case studies to be completed using computer spreadsheets and course specific software.

**Attendance:** Students are expected to attend all classes, except when precluded

by emergencies or other extenuating circumstances. You are responsible for the material discussed in the class and any announcements, assignments, and syllabus changes discussed during class. Attendance will be taken at the beginning of each class. Historical trends reveal a correlation between attendance and performance.

**Homework:** Problems will be assigned for most of the chapters. The problems will be from class discussion topics. Students are responsible for their homework problems. If students are finding difficulty in solving any problem, they should consult me via email, during class or an office visit. It is highly recommended that students maintain a portfolio of problems and assignments as the final is cumulative. Videos and exercises will also be assigned from Khanacademy.org. Completion of these assignments counts towards homework.

**Quizzes:** Short quizzes may be administered during class.

**Computer:** A variety of problems/case studies will be given to students to solve and analyze using spreadsheet or computer software that comes with the book.

**Homework, quizzes and computer work** will account for **25%** of the course grade. No work will be accepted after the due date, which will be announced in the class for each project.

**Evaluation Process**:

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|  | There will be **4** **tests** during the semester and a **Midterm** & F**inal Exam.**  The distribution is as follows:  4 Tests 40%  Research Paper & Presentation 10%  Quizzes 10%  Homework 10%  Midterm Exam 10%  Comprehensive Final Exam 10%  There will be NO MAKE-UP quiz or test or exam.  Meaningful Participation + attendance 10%  Mid-term grades will be based on First 3 Tests & Quizzes.  **Material for all assignments, exams and projects will be taken from your text and class lectures.**  1ST HALF OF THE SYLLABUS ASSIGNMENTS MUST BE COMPLETED BEFORE THE MID TERM EXAM.  2ND HALF OF THE SYLLABUS ASSIGNMENTS MUST BE COMPLETED BEFORE THE FINAL EXAM.   |  |  | | --- | --- | | Late Work Policy | | | 1 – 2 Days Late | 25% Off | | 3 – 5 Days Late | 50% Off | | 6 of More Days Late | 75% Off |   **Attendance** will be taken at the beginning of each class. Students are expected to come on time. Students coming late disturb the class environment. Class starts promptly at the designated time. Make all arrangements to be on time and be in class. To promote attendance, points will be deducted from the **final average** as follows: 1 absence = 1 point.  **There will be NO MAKE-UP quiz or test or exam.**  Mid-term grades will be based on the average of all the assessments you have accumulated by Mid semester.  Final grades will be based on the average of all the assessments you have accumulated in the entire semester  Please note that I **do not curve** grades. Effort and, more importantly, performance, are the key ingredients in each person’s grade. Effort alone is not enough. It is important to realize that ‘effort’ is not what is rewarded in life but the performance that results from that effort. In this class you must perform well to succeed. It works the same way in the business world. And just as the business world does not “curve” your performance, neither does your course instructor.  **Examination Policy:**  The exam dates are listed on the “Tentative Course Outline”. Since the exam dates are known well in advance, **ALL** students are expected to arrange their schedules accordingly. Students missing an exam will receive a grade of zero for the exam.  Both your Midterm and Final exams **MUST BE TAKEN UNDER the prescribed PROCTORED CONDITIONS. The times, dates and place will be determined as we approach the date for those exams.**  **Make-up Policy:**  **NO make-up tests or assignments will be allowed.** Exception will be for a “personal bona-fide documented medical emergency” approved by the instructor. When calculating the grade for a make-up exam/quiz, **5 points will be deducted** from your total grade on the make-up. Your instructor believes that to be given full credit would not be fair to the students who took the test at the prescribed time and, more importantly, had no additional time to prepare for the test. Any make-up allowed (under the exception above) will not be administered during regular class time, and the date/time decided on will be at the instructor’s discretion.  **Extra Credit:**  **No extra credit** is available. |

**Academic**

**Integrity:** In order to assure the integrity of all academic work, the instructor has the authority to deny admission to the classroom to any student who arrives late for a test, and under no circumstances is the instructor to permit a student to take the examination if the student arrives after another student has left the examination room. Students are expected to comply with the directions given by the instructor as to seating arrangements, use of tables, calculators, etc.

If a student’s test gives evidence of not being completely his/her own work, he/she may be given an F for the course. A student that communicates with anyone during the course of an examination or test, unless with the permission of the instructor, may be immediately dismissed from the room and given an F. Such communication includes situations where a student brings study materials into the examination room without the instructor’s permission. It may be assumed that the student intended to use such materials unlawfully, and he/she may be penalized accordingly. The faculty member is to report immediately to his/her chair and dean any incident involving academic dishonesty.

**Evacuation Procedures**: Please follow the University guidelines in the event of an evacuation.  The University’s emergency website is [http://www.xulaemergency.com/](http://www.google.com/url?q=http%3A%2F%2Fwww.xulaemergency.com%2F&sa=D&sntz=1&usg=AFQjCNHU4A2ILbqv5d3jXvLRx6kfNFENMQ) and emergency phone number is 1-866-520-XULA.

Please take your books and notes with you in the event of an evacuation.  The instructor will be in touch with you via email and Brightspace as soon as possible after the evacuation.  You will be expected to continue the academic work in case of an extended evacuation.  Detailed guidelines will be posted on the Brightspace and/or emailed to you."

**Grading:** The grading scale will be as follows:

90-100 A

80-89 B

70-79 C

60-69 D

Below 60 F

**Tentative Class Schedule**

**Course Outline**:

1. Introduction to Quantitative Analysis
   1. Decision making; discipline of management science
   2. Model building; breakeven analysis

1. Probability (Sections 2.1 – 2.6)**Mystatlab HW & Quizzes for chapters#4,5,6**

A. Basic probability concepts

B. Addition and multiplication rules

C. Conditional probability

D. Bayes Theorem

1. Transportation Problems (Supplementary notes)

1. Steppingstone Method: improvement indexes, costs
2. Balanced and unbalanced problems

IV. Linear Programming

1. Characteristics and examples
2. Graphical method (maximization & minimization)
3. Slack and surplus variables; special cases
4. Formulation
5. Forecasting **Mystatlab HW & Quizzes for chapters#16**
7. Qualitative approaches
8. Averaging methods
9. Exponential smoothing
10. Regression and correlation **Mystatlab HW & Quizzes for chapters#14&15**

E. Time series with seasonal adjustments

VI. Inventory Control Models Simulation

1. VII. Probability Distributions and Decision Analysis **Mystatlab HW & Quizzes for chapters#17**
3. A. Alternatives, states of nature, payoff tables
4. B. Decision making under uncertainty: optimistic,
5. conservative, regret, & equally likely criteria
6. C. Expected value, decision making under risk

D. Conditional profits tables, expected profits under risk

1. E. Expected profit under certainty, EVPI
2. F. Exp. net marginal profit; cutoff probabilities
3. G. Normal distribution
4. H. Application of normal distribution to inventory levels

VIII. Decision Analysis

IX. Project Management

X. Waiting Lines and Queuing Theory Models

XI. Statistical Quality Control

**Other Points of Interest:**

## Brightspace:

Brightspace will be used for this course. Please check the website periodically for updated course information. Should we have any scheduled interruptions due to weather or any other reason, I will use the website to disseminate updated course and schedule information. I also answer many questions students email me using Brightspace so all can benefit from the question and answer. Any information distributed via Brightspace is considered official notification!

For these reasons it is imperative for you to regularly check the email address that Brightspace uses for you. It is probably your XULA account. It is the student’s responsibility to make sure they are properly setup to receive emails sent out via Brightspace. This includes the student’s responsibility to **clean out his/her email account and email “delete” file REGULARLY**. If your mailbox is full you will not receive my email messages and thus miss very important class information. Also, do not email me and ask me to send you a separate copy of something I emailed via Brightspace.

## Attendance Policy:

Attendance is must to earn participation points and to learn concepts beyond the textbook. Please also note that we will cover a large amount of material each week. With that volume in mind, missing any assignments or self-study time equates to losing a substantial amount of valuable information and can lead to a higher probability of failure. If you must take time away due to being either hospitalized or having had a car accident you are encouraged to call me.

## Cell Phone and Beeper Policy & Disruptions:

**Cell phones are NOT TO BE USED during testing or in class.**

### Students with Disabilities/Americans With Disabilities Act (ADA):

It is the general policy of XULA to assure equal opportunity for all qualified persons. Reasonable accommodations for qualified persons with disabilities will be made provided the students have self-identified with the Office of Disability Services and have provided required documentation. Individual instructors will modify the methods, requirements, and procedures of courses and examinations appropriately to accommodate the special needs of students with disabilities, provided the academic integrity of the course or examination is not violated and the health and welfare of all students are safeguarded.

**Academic Integrity (Cheating):**

Academic integrity is fundamental to the process of learning and evaluating academic performance. Academic dishonesty will NOT be tolerated. Academic dishonesty includes, but is not limited to, the following: cheating, plagiarism, tampering with academic records and examinations, falsifying identity, and being an accessory to acts of academic dishonesty. Students are expected to conduct themselves according to the highest standards of honesty. Any student witnessed giving or receiving unauthorized information on any exam or plagiarizing sections of their term paper will be referred to the student judiciary for prosecution. Refer to the Student Judicial Code for more information.

***Class Participation:*** You must participate and interact in class discussions to show your knowledge of the material. In evaluating the quality of participation in class discussions and assigned cases, I will consider your preparedness, logical reasoning, and the ability to apply general concepts to the specific situations under discussion. It goes without saying that you must be present to participate, so attendance is expected.

**Instructors Notes on the Text:**

Much, if not all, of the information contained therein will remain timeless – meaning that the text may act as a continuing reference. The student is therefore advised to retain the text for future reference if at all possible.

**Instructors Suggested Readings:**

**Performance Ready Reader**: Tunguz, T. & Bien, F., (2016) “Winning with Data”., Wiley, Hoboken, NJ

Discovering the Soul of Service, by Leonard L. Berry

The Wall Street Journal

The Goal; by Eliyahu M. Goldratt & Jeff Cox

Business Week

Entrepreneur

Customer for Life; by Carl Sewel

The Harvard Business Review

***The Research Paper***

Understand that any information you use MUST be cited in your paper. Please follow this link <http://www.hrpub.org/journals/jour_guidelines.php?id=16> for formatting your research paper.. At this point discussion warrants review of my policy on Academic Integrity found in this class syllabus. **Academic dishonesty will NOT be tolerated.** Academic dishonesty includes, but is not limited to, the following: cheating, plagiarism, tampering with academic records and examinations, falsifying identity, and being an accessory to acts of academic dishonesty. **This is a research paper. Make sure to completely cite all information lifted, quoted or paraphrased.**

The paper must be typed in 12 point, Arial font, single spaced, and one inch margins. Be sure to number the pages. There is no page limit. However, do not ramble-on with unimportant information. The paper is expected to be complete and concise similar to sample research paper on posted on Brightspace.

**Paper Feedback:**

Paper feedback is offered twice during the semester. The student will send, by email attachment, the paper in its draft condition for each of the feedback sessions. The instructor will ask questions and make comments directly on the electronic paper which will then be sent back by email to the student. All students are expected to submit work for feedback. If performed properly, and on time, this process should take about two (2) weeks to complete. Please check the Tentative Course Schedule for the due dates when project drafts are to be submitted. **The second review is the last opportunity for students to receive feedback on the projects from the instructor** and will operate much like the first feedback session. After that time, NO questions about the paper will be answered.

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| **Research Paper guidelines and grade breakdown** | | | | |
| Students are free to pick a topic that is connected to this course or any closely related field of their expertise. The topic has to be approved by me before you start your research. Please use these links below for some sample papers.  <http://journals.cluteonline.com/index.php/IBER/article/view/3699/3743>  <http://www.hrpub.org/journals/article_info.php?aid=583>  <http://www.dtic.mil/docs/citations/ADA596885>  <https://cmd.dtic.mil/login-reg/generic.jsp?TYPE=100728833&REALMOID=06-0b4e5624-5088-103f-8482-8396ac570cb3&GUID=&SMAUTHREASON=0&METHOD=GET&SMAGENTNAME=olHaYdeyHv4zVMCSUwGWlUHU1xuFRpPZyP9UtkOzntAsnDhgeCHhtOcc0sihXLiM&TARGET=$SM$HTTPS%3a%2f%2fwww%2edtic%2emil%2fDTICOnline%2fdownloadPdf%2esearch%3fcollectionId%3dtr%26docId%3dADB399367>  <http://www.cluteinstitute.com/ojs/index.php/IJMIS/article/view/8096> | | | | |
|  | | | | |
| Student Name |  | | | |
| Paper Title: |  | | | |
| **Research Paper Evaluation Report** | | | | |
|  | | | |
| Advantage & Disadvantage | | **For example my suggestions will be:**  **The paper deals with an interesting subject**  **The paper doesn’t use statistical data to support conclusions** | | |
| How to improve | | **Professor will suggest** | | |
| Please rate the following: (1 = Excellent) (2 = Good) (3 = Fair) (4 = Poor) | | | | |
| Originality: | | | **5%** | |
| Contribution to the Field: | | | **5%** | |
| Technical Quality: | | | **5%** | |
| Clarity of Presentation : | | | **5%** | |
| Depth of Research: | | | **5%** | |

**FINAL EXAM: As per the University schedule.**

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| **Course Policy:** | Late work for all work submitted to instructor will be penalized one letter grade if not submitted by deadline. There will be no “I” grades allowed for this course. Students are expected to come prepared to class and have all readings completed in order to facilitate discussion in class. |

**Do not take this class if you cannot take the Final Exam at the scheduled time!!!**

**I have read this Syllabus and understand the class policies as stated.**

Signature Date

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Print your name.

***This syllabus is subject to change at the discretion of the instructor. Changes will be handed out in written form as an addendum to the syllabus. The course goals, objectives and students competencies will not change.***