FACULTY INFO: Mack Smith   Email: msmith@deltastate.edu   Office: EW 358 (alt BR 284)   Phone: 846-4517

COURSE NUMBER, TITLE MAT 103-02 Quantitative Reasoning (CRN: 12254)

COURSE TEXT Staszkow and Bradshaw. Thomson, Brooks/Cole, 2005. (ISBN 0-495-13106-7)

COURSE DESCRIPTION Numerical, visual, verbal, and symbolic aspects of quantitative reasoning with emphasis of interpretation of quantitative information in real-world problems. Satisfies general education requirements. Prequisites: 2 years of high school algebra or equivalent. 3

GENERAL COURSE OBJECTIVES (GOALS) This course seeks to develop in the student a competency in problem solving and analysis which will be helpful in personal decision–making, in evaluating concerns in the community, city, and nation, and in setting and achieving career goals.

GENERAL EDUCATION COMPETENCIES Students will demonstrate competency in:
GE 1. **Critical and Creative Thinking**-Developing sound analytical and reasoning skills and the ability to use them to think critically, solve problems, analyze logically and quantitatively, and effectively respond to change.
GE 2. **Communication**- Developing skills to communicate effectively through reading, writing, speaking, and listening.
GE 3. **Quantitative Skills-** Developing enhanced abilities for symbolic and numeric reasoning.

SPECIFIC OBJECTIVES
At the completion of the course students will
1.   Define key terms related to sets, Venn diagrams, algebraic models, probability, statistics and finance. (GE 1, 3)
2.   Use Venn diagrams to solve problems related to surveys and probabilities. (GE 1, 3)
3.   Use counting techniques as methods of problem solving. (GE 1, 3)
4.   Calculate and interpret probabilities, including probabilities from frequency tables, graphs, and probability distributions. (GE 1, 3)
5.   Compute and interpret statistics pertaining to data sets. (GE 1, 3)
6.   Gather, organize, describe, and analyze data to make and support decisions. (GE 1, 3)
7.   Communicate results using the language of probability and statistics. (GE 2)
8.   Solve personal finance problems related to savings and interest, taxes, discounts, credit, and other purchases, such as homes and automobiles. (GE 1, 3)
9.   Apply a variety of problem-solving techniques to real-world problems. (GE 1, 3)

Each of these objectives may also be linked to Student Learning Outcomes for the Department of Mathematics. A numbered list of these Student Learning Outcomes is on file in the Department of Mathematics. Each of these specific objectives may be linked to Student Learning Outcome 2. Since each test will require students to provide written explanations of concepts, these objectives are also linked to Student Learning Outcome 3.

MAJOR STUDENT ACTIVITIES
1.   Regular and punctual attendance is expected of students and students must adhere to the attendance regulations of the University and the Department.
2.   Students must complete required homework and lab assignments that will be collected and graded at the discretion of the instructor.
3.   Students will take quizzes, both announced and unannounced.
4.   Students will take four assigned tests during the semester.
5.   Students will take a comprehensive final exam at the end of the semester.
6.   Students are expected to participate in all class activities.

EVALUATION AND GRADING

Grades will be assigned according to the following scale.
A(90 - 100)   B(80 - 89)   C(70 - 79)   D(60 – 69)   F(Below 60)

1. Assigned homework will be collected and graded at the discretion of the instructor. **No homework credit** will be awarded for **answers only** (nor late homework) unless this has been agreed upon prior to the assignment. Quizzes will

also be given throughout the semester. **Calculator use is permitted on all in-class work as well as on homework and tests.** However **cell phones are not allowed for calculator use**.

2. Four scheduled tests will be given during the semester. Your homework/quiz average will count as a fifth test grade. These scores will comprise 75% of your final grade. **A comprehensive final examination** will comprise the other 25%.
3. There will be at least one question on each test that requires you to provide a written explanation of a concept. evaluation of the answer to this question will include mathematical content, spelling, grammar, and sentence construction.

PRESENTATION METHODS

80% Lecture, Cooperative learning activities 20%.

ACADEMIC HONESTY POLICY Cheating and plagiarism **are not tolerated**. If it is established that a violation has occurred, the instructor may determine the penalty, or he/she may report the offense to the department chair and dean of the school. The usual penalty involves a grade of zero on the test, examination, or paper in question.

ADA STATEMENT – REFERENCE TO COUNSELING CENTER FOR DISABILITIES Delta State University is committed to a policy of equal employment and educational opportunity. Delta State University does not discriminate on the basis of race, color, religion, national origin, sex, age, disability, or veteran status. This policy extends to all programs and activities supported by the University. The Office of Disability Services is available for students who require academic accommodation due to any physical, psychological, or learning disability. Any student with a clinically diagnosed disability who desires accommodation under this Act should contact Dr. Richard Houston in the Office of Disability Services at 846-4690.

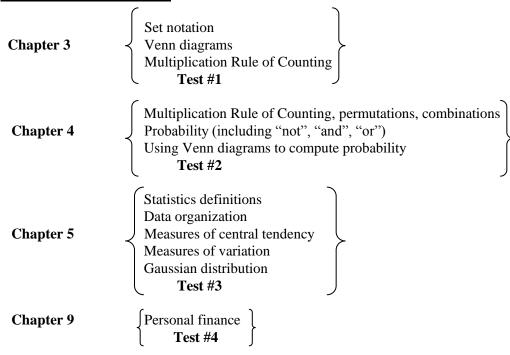## ADDITIONAL COURSE-SPECIFIC RULES, POLICIES, EXPECTATIONS

1. **Prompt** and **regular** attendance is necessary for success in this course. To receive credit in this course, a student must attend a minimum of 75% of the class meetings. Classes meeting three times per week will be allowed 11 absences, **excused and unexcused**. Those meeting **two times per week** will be allowed **7 absences**. **Absences will begin to accrue the first official day that this class meets, regardless of when you actually enroll in the class.**
2. If a student is tardy for class, it is the student's responsibility to request that the faculty member change the recorded absence to a tardy. **This must be done on the day the tardy occurs**. A maximum of 3 tardies will be allowed. Each additional tardy will be recorded as an unexcused absence.
3. **Perfect attendance will be rewarded at the end of the semester**. Two points will be added to your final semester average if you have no absences, excused or unexcused, and one point will be added if you have only one absence, excused or unexcused. **Please remember to notify me if you are tardy for class! Do this the day the tardy occurs so that I might change the recorded absence to a tardy.** Failure to do so will result in the loss of your perfect attendance points.

CLASSROOM POLICIES

1. There will be **no extra credit to improve a grade** at the end of the semester. Your grade will be earned <u>throughout</u> the semester.
2. **Cell Phones and Pagers must be turned off and stored out of sight during class**. Cell Phones may not be used as calculators.
3. Come to my office for help during scheduled office hours. No appointment is necessary. It is extremely important that you understand the day's material and are able to complete the homework assignments from each class meeting **before** we meet another class. If your class and/or work schedule conflicts with the office hours I offer, please feel free to make an appointment for a time not listed or take advantage of the tutors in The Academic Support Lab in room 311/331 of the Student Union Building.
4. Scheduled tests will be announced at least one week prior to the actual test date. Make-up tests will be given only to those students presenting a written excuse, acceptable by the university. **Any absence from scheduled work must be covered by a written excuse by the Vice President for Academic Affairs, the Student Health Service, or a doctor before the student is allowed to make up that missed work**. **All make-up work must be completed within three days of returning to class**. Any exception to this rule must be arranged before the work is missed.

5. **A calculator** with a statistical package **is required for this class**. Again, you may NOT use your cell phone.
    BRING YOUR CALCULATOR TO CLASS EACH DAY! *DO NOT ASK TO BORROW MINE!!!*
6. Take earphones and listening devices out of your ears upon entering the classroom.
7. Do not ask to leave class early. Schedule all appointments at times that do not conflict with class time.

TENTATIVE SCHEDULE

Chapter 3
- Set notation
- Venn diagrams
- Multiplication Rule of Counting
    - **Test #1**

Chapter 4
- Multiplication Rule of Counting, permutations, combinations
- Probability (including "not", "and", "or")
- Using Venn diagrams to compute probability
    - **Test #2**

Chapter 5
- Statistics definitions
- Data organization
- Measures of central tendency
- Measures of variation
- Gaussian distribution
    - **Test #3**

Chapter 9
- Personal finance
    - **Test #4**

IMPORTANT DATES

January 26, 2015 is the last day that a course may be added to your schedule; this includes changes from one section to another within the same course. Those who plan to **audit** this course, must make the change by **January 26, 2015**. Students who remain in the course **after January 27, 2015**, and then elect to drop the course will receive a grade of **W if passing or F if failing** the course at the time of the drop. The withdrawal process in not complete until the drop slip has been signed by all designated parties and the completed form has been turned in to the Registrar's office. **The last day to drop a class is May 1, 2015**. The **comprehensive final exam* will** be given on **Monday, May 4, 2015 at 8:00 am (places to be announced)**.

Free tutoring will be available in the Academic Support Lab for students who need help outside of class. It is located in the H. L. Nowell Student building, room 311/331. Contact Doug Johnson at 846-4654 for hours. There may be a tutor in the math department also.

Martin Luther King Holiday	**January 19, 2015**
Mid-term grades Reported	**March 3, 2015**
Spring Break	**March 9–13, 2015**
Good Friday	**April 13, 2015**
Final Exams	**May 5 - 9, 2015**
Spring Commencement	**May 9, 2015**

OFFICE HOURS

Monday	Tuesday	Wednesday	Thursday	Friday	Location
10:00 – 11:00	10:00 – 10:50	10:00 – 11:00	10:00 – 10:50	10:00 – 11:00	EW 358*
1:00 – 1:50	1:00 – 1:30	1:00 – 1:50	1:00 – 1:30		EW 358*
5:00 – 7:00	5:30 – 6:00*		5:30 – 6:00*		BR 284

Other Times by Appointment