> **MATH 1313 – QUANTITATIVE REASONING**
> **Fall 2015 – Course Syllabus**

Course Coordinator: Mrs. Cassandra Linde

Instructor: Mrs. Cassandra Linde
Office: CHPN 322
Email: clinde@uark.edu
Office Hours: posted on Blackboard

Course Description:
Quantitative reasoning (QR) is a habit of mind and requires extensive interaction between students and teachers. This course seeks to include command of both the enabling skills needed to search out quantitative information and power of mind necessary to critique it, reflect upon it, and apply it in making decisions. Consider this course preparation for the "real world."

Textbook/Required Materials:
• Madison, B. L., Boersma, S., Diefenderfer, C. L., & Dingman, S. W. (2012). *Case Studies for Quantitative Reasoning (3rd edition)*. Pearson Custom Publishing: New York.
• A calculator is required**.**

Note: This class relies on technology to assist in the collection of pertinent information. Students are encouraged to bring laptops and tablets to class. Other types of technology are allowed only by instructor preference. All technology should be used in a manner befitting the classroom environment. The instructor reserves the right to place restrictions on technology used during quizzes and tests.

Important Aspects:

1) **Writing assignments:** Students are responsible for the production of four written assignments during the semester. Each assignment is accompanied by peer review.
2) **Reading journal:** Students are required to keep a reading journal which will consist of the summarization of one article (containing math and/or quantitative reasoning) per week throughout the semester. Students should be prepared to turn in this journal upon request from the instructor.
3) **Examination Material:** This will include questions similar to material presented in group exercises and homework, questions about mathematical and statistical concepts discussed in class, and new material contained in newspaper and magazine articles. Students are required to take a midterm and a final exam.
4) **Quizzes/homework:** Students are expected to complete all quizzes and homework assignments.
5) **Attendance:** An important aspect of this class is attendance. Attendance will be taken each class period.
6) **Case Studies.** Case studies involve discussion of news articles that contain substantial mathematical material and extending the mathematics. Sometimes the case study will be discussed for more than one class period. Group exercises will contain questions about the articles.

Grading:

Four writing assignments with peer review:	10% each (for a total of 40%)
Journal articles:	10% (for all articles combined)
Midterm (including chance to make-up):	20%
Final:	20%

Attendance and Participation:	10%
News of the Day:	Bonus points factored into participation grade

Letter Grades:
A: 90 – 100%
B: 80 – 89.9%
C: 70 – 79.9%
D: 60 – 69.9%
F: Below 60%

Tentative Schedule:
Section 1) Extracting Data
Week 1: Units and Rate
Week 2: Large Numbers
Week 3: First Writing Assignment
Week 4: Ratio and Percent

Section 2) Considering / Comparing Data
Week 5: Percent Change
Week 6: Contextual Accuracy and Misleading Numbers
Week 7: Midterm
Week 8: Student Interviews
Week 9: Second Writing Assignment
Week 10: Averages

Section 3) Making Decisions
Week 11: Linear vs Exponential Growth
Week 12: Third Writing Assignment on Credit Cards
Week 13: Probability
Week 14: Risk
Week 15: Fourth Writing Assignment

Final

Dynamics of the QR Classroom: This is not your typical math class. Reading and writing are huge components of this class. In order for a student to be successful in this class, reading and writing appropriately are of great importance. Techniques for writing and computation will be explored by input from the instructor and by organic generation from the group members.

Citations: You are required to cite any information that you obtained from any source other than your own brain. For example, if you Google the "best things about being a student at the University of Arkansas" and use a list of the information obtained in a project/paper, you must cite the source of your list. If you fail to cite any source, it is considered plagiarism and academic dishonesty and is punishable under university regulations.

Academic Integrity:
As a core part of its mission, the University of Arkansas provides students with the opportunity to further their educational goals through programs of study and research in an environment that promotes freedom of inquiry and academic responsibility. Accomplishing this mission is only possible when intellectual honesty and individual integrity prevail.

Each University of Arkansas student is required to be familiar with and abide by the University's Academic Integrity Policy which may be found at http://provost.uark.edu/. Students with questions about how these policies apply to a particular course or assignment should immediately contact their instructor.

Inclement Weather Policy:
Class will meet unless the university is closed. You should make your own decisions in the best interest of personal safety. If attendance is severely affected by weather, deadlines and exam dates may be adjusted. Please do not contact the Mathematical Sciences department with weather related inquiries. If necessary, you may email the instructor directly with those questions.

Accommodations:
Under University policy and federal and state law, students with documented disabilities are entitled to reasonable accommodations to ensure the student has an equal opportunity to perform in class. If any member of the class has such a disability and needs special academic accommodations, please report to the Center for Educational Access (CEA). Reasonable accommodations may be arranged after CEA has verified your disability. You must submit your paperwork to your instructor as soon as possible. This must be done before accommodations can be arranged for any class assignments, quizzes, or exams.

NOTE: The instructor reserves the right to make changes to the syllabus as needed. If changes are made, you will be notified of the changes in class or by your university email address.