

Course Description of MATH 1313 Quantitative Reasoning Spring 2016

Course Coordinator– Professor Bernard L. Madison

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Textbook – *Case Studies for Quantitative Reasoning: A Casebook of Media Articles (3rd edition)* by Madison, Boersma, Diefenderfer, and Dingman; Pearson Learning Solutions 2012.

More information available at <http://www.cwu.edu/~boersmas/QRCW/>

A graphing calculator is required – one of TI- 82, 83, 84, 85, 86, or 89. It is important that these models be used—certain activities in class require the use of functions found on the TI calculator. Cell phone calculators are not allowed on quizzes and tests.

The major source materials for this course will be newspaper and magazine articles. We will read, analyze, interpret, and critique the mathematics, statistics, and other quantitative information in the articles. From time to time we will use other resources, mostly on line.

The major goal of the course is as follows: *Students will develop the power and habit of mind to search out quantitative information, critique it, reflect upon it, and apply it in their public, personal and professional lives.*

Course Components

- 1) **Writing assignments:** Students are responsible for the production of four written assignments during the semester.
- 2) **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.
- 3) **Quizzes/homework:** Students are expected to complete all quizzes and homeworks.
- 4) **Attendance:** An important aspect of this class is attendance. Students will need to be present for peer reviews, quizzes, and the delegation of homework assignments.
- 5) **Case Studies.** Discussion of news article(s) that contains 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.
- 6) **News of the Day.** Each student will locate and bring to class media articles that have quantitative content. The student will present the article to the class explaining the content and/or posing questions about the content.

Course grades will be determined by student performances on the quizzes, group exercises, contributions to today's news, homework scores, and two examinations – one

about mid-term and the final examination at the time in the University schedule. Total points:

Four writing assignments – 150 points¹ (Each scored on basis of 100)

Homework, quizzes, and group exercises – 250 points (Lowest 4 scores will be dropped after all scores are converted to scores of 10. For example, a quiz may be 30 points, and this would be equivalent to three 10-point daily exercises. So a score of 24 would be recorded as three scores of 8².)

Attendance and Participation – 50 points (minus 10 here if no satisfactory news of the day article and loss of points for unexcused absences)

Mid-term exam – 125 points

Final exam – 125 points

Today's news contributions beyond the one required or other significant contributions to enriching class discussions will add bonus points from 0 to 5. See explanation on another page.

Earning 90% of the 700 points will merit a grade of A, 80% for a B, 70% for a C, and 60% for a D.

Class attendance is essential – be on time, too. Attendance will be taken each class period, and unexcused absences will result in loss of points for participation and attendance. Work done in class for scoring can be made up only if you are excused from attendance for valid reasons and you complete the work by the next class you attend. Scores for late assignments will be penalized an amount based on how late and the reasons for being late.

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.

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 Lab for Educational Access (CEA) located in the Student Union. Reasonable accommodations may be arranged after the CEA has verified your disability. You must see your instructor as soon as possible. This must be done before you utilize your accommodations. Do not hesitate to contact your instructor if any assistance is needed in this process.

¹ As an example, if you receive 320 of the possible 400 points on the 4 writing assignments, you will receive 320/400 (= 80%) of the 150 points, or 120.

² As an example, suppose we have 35 scores of 10 on quizzes and exercises during the term. The lowest 4 will be dropped leaving 31 scores of 10 possible. If a student has earned 285 of the possible 310 points, then the student will get 285/310 (= 92%) of the 250 points, or 230 points. Assume the student has a participation score of 45 (out of 50), writing assignments score of 125 (out of 150), a mid-term score of 80 (out of 125) and a final exam score of 110 (out of 125). The student's total score is 230+45+125 +80+110 = 590, or 84.3%, earning a grade of B.

Many types of **emergencies** can occur on campus; instructions for specific emergencies such as severe weather, active shooter, or fire can be found at emergency.uark.edu.

Severe Weather (Tornado Warning):

- Follow the directions of the instructor or emergency personnel
- Seek shelter in the basement or interior room or hallway on the lowest floor, putting as many walls as possible between you and the outside
- If you are in a multi-story building, and you cannot get to the lowest floor, pick a hallway in the center of the building
- Stay in the center of the room, away from exterior walls, windows, and doors

Violence / Active Shooter (CADD):

- **CALL-** 9-1-1
- **AVOID-** If possible, self-evacuate to a safe area outside the building. Follow directions of police officers.
- **DENY-** Barricade the door with desk, chairs, bookcases or any items. Move to a place inside the room where you are not visible. Turn off the lights and remain quiet. Remain there until told by police it's safe.
- **DEFEND-** Use chairs, desks, cell phones or whatever is immediately available to distract and/or defend yourself and others from attack.

Inclement Weather Policy - Class will meet unless the University is closed. On-campus students are expected to be present. Off-campus students should make their own decisions in the best interest of personal safety. Off-campus students will not be penalized for being absent on those days the Fayetteville Public Schools are closed due to weather. If attendance is severely affected by weather, deadlines and exam dates may be adjusted. Please do not call the Department of Mathematics with weather-related inquiries. You may call me on my cell (283-4255) or my office (575-6317) or e-mail me for information.

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