GALLAUDET UNIVERSITY

QUANTITATIVE REASONING APPROACH – FALL 2012 – 3 CREDITS
GSR104-04 – MW 3:00PM TO 4:20PM – HMB S136

INSTRUCTOR: SUSANNA HENDERSON	**OFFICE: HMB S344D**
E-MAIL: susanna.henderson@gallaudet.edu	**VP NUMBER: TBA (office)**
OFFICE HOURS: MW 10:00-11:30 AND 1:00-2:30PM, OR BY APPOINTMENT	

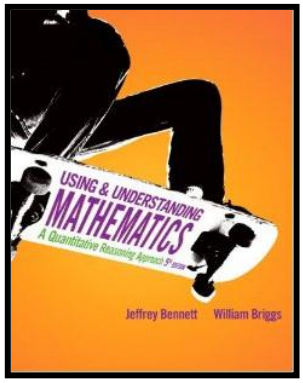
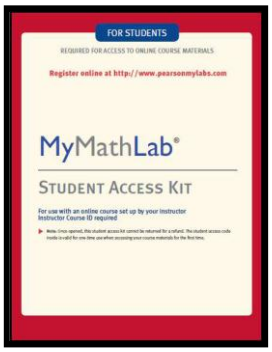
COURSE DESCRIPTION:

News headlines:
"Average college credit card debt rises with fees, tuition."
"College debt has grads struggling to buy home. Many 30-year-olds can't get most loans."
"Extreme obesity can shorten people's lives by 12 years."
"Starving the Future"
News headlines are generated to lure people into reading their articles. Some headlines are powerful while others are not so powerful. However, an article that talks about tracking numbers, averages, or an increase/decrease in something almost always has data to justify their headlines. Should we believe everything that the articles present? How are these numbers generated? How can the reader interpret the data and draw conclusions to make informed judgments?

This course is designed to achieve mathematical literacy among liberal arts students. It includes the mathematics, logic, and problem-solving skills needed to make informed judgments in the contexts of science, technology, and society. Topics include number sense, statistics, probability, geometry, linear and exponential modeling, graphing, and data analysis. This is not a traditional abstract math class, but focuses on using mathematics and quantitative reasoning as valuable tools for comprehending the world in which we live.

Prerequisite: Qualifying performance on the English assessment or screening; passing ASL screening; high school algebra and passing the math screening test; or passing MAT 040.

TEXT:

	
Using and Understanding Mathematics: A Quantitative Reasoning Approach by Jeffrey O. Bennett and William L. Briggs, 5th ed., Pearson Education 2011.	MyMathLab -- Buy the Access Code at the bookstore. This is absolutely **REQUIRED** for this course. [Do **not buy** this book via **AMAZON**.]

MATERIALS REQUIRED:

- Pen and/or pencil
- 3-ring binder with paper
- TI-84 Graphing Calculator required. TI-83 is acceptable.
- Access to Computer with MS Office (Word and Excel) and the Internet (www.coursecompass.com or www.mymathlab.com)

COURSE GOALS:

- To learn mathematics with an emphasis on understanding how it can be applied in different situations.
- To learn to communicate mathematically; helping others understand why a claim is true and listening and appraising others' explanations. *Communication is learned through group work and homework, utilizing both ASL and written English skills.*
- To become an active and independent learner of mathematical concepts.

LEARNING OUTCOMES:

Student Learning Outcomes	Course Objectives
1. Language & Communication	1a. Interpret and represent mathematical information symbolically, visually, numerically, and verbally.
2. Critical Thinking	2a. Interpret mathematical models such as formulas, graphs, table, and schematics, and draw inferences from them. 2b. Make decisions in the contexts appropriate to mathematical or formal analysis, including selection of appropriate modes of analysis and presentation of quantitative information, and articulation of the limitations of the methods chosen.
3. Identity & Culture	3a. Recognize the mathematical basis for larger cultural and economic trends that impacts society. 3b. Understand the quantitative decisions which impacts self.
4. Knowledge & Inquiry	4a. Demonstrate knowledge of the mathematical tools in problem solving.
5. Ethics & Social Responsibility	5a. Assess the consequences of actions. 5b. Recognize and identify how differences in numbers can influence the decision-making in what is right or wrong.

TEXTBOOK TOPICS COVERED:

CHAPTER 1:	THINKING CRITICALLY	CHAPTER 5:	STATISTICAL REASONING
CHAPTER 3:	NUMBERS IN THE REAL WORLD	CHAPTER 6:	PUTTING STATISTICS TO WORK
CHAPTER 4:	MANAGING YOUR MONEY	CHAPTER 7:	LIVING WITH THE ODDS

GRADING ASSESSMENTS:

GSR 104	
Assignment & Weighing	
Individual/Group Projects -	30%
Final Exam -	20%
Attendance/Participation -	15%
Assignments/Journals -	15%
Exams/Quizzes -	20%

Grading Scale for Final Grade		
Grade	**Quality Points per hour of credit**	**Suggested Equivalence[1]**
A	4.0	93 and above
A-	3.7	90-92
B+	3.3	87-89
B	3.0	83-86
B-	2.7	80-82
C+	2.3	77-79
C	2.0	73-76
C-	1.7	70-72
D+	1.3	67-69
D	1.0	60-66
F	0.0	Below 60

ATTENDANCE/PARTICIPATION & EXPECTATIONS:

1. Class attendance is **REQUIRED**. Due to the interactive nature of the classroom environment, most students find that attending class regularly is essential to learning the materials. You can have **ONLY** one week's worth (2 for MW classes) of excused absences. For every unexcused absence and every absence after your week of excused absences, points will be deducted from your participation/attendance grade. E.g. If you miss a week's worth of classes without an excuse, 10 points will be deducted from your attendance grade.

2. Pagers or other electronic devices **MUST BE OFF and KEPT OFF** during the entire classroom period. You may not use your electronic device(s) to calculate your answers. Purchase a calculator to calculate your answers.

3. Each assignment will be handed out or posted on the Blackboard (Bb). It must be handed in **ON TIME.** If the assignment is turned in one day **LATE** without a mutual agreement upon an alternative submission date in advance, a **10% GRADE DEDUCTION** will be applied. Each day is equivalent to a day, not a class day. After one day, it is considered as uncompleted task, which means **ZERO**. You are ***RESPONSIBLE*** for getting handouts that are distributed in class yourself. If you know that you will be absent or unavailable the day an assignment is due, please make sure your assignment is completed before or by the due date. If you have technical difficulties, e-mail your instructor.

4. A percentage of your grade is directly related to your class contribution. Students are expected to make positive contributions, which foster a professional, analytic atmosphere. Healthy debate is encouraged, but students must be mindful that remarks that demean others and/or their opinions are not tolerated.

5. Make-up work will be provided with **documented** medical excuses and personal emergencies. Make-up work that is not made up by the agreed date between the student and the instructor will be considered a **ZERO.** In other words, late work will not be accepted.

6. Academic Honesty is strictly enforced at Gallaudet University. Please refer to the Academic Policy later in this syllabus.

GRADING ASSESSMENT DETAILS:

Individual Investigation/Group Projects:

- Individual Investigations are written assignments where you incorporate the concepts learned in class and relate them to the real world.
- You will be working in either individual or in a group of 2 or 3. Topics for a project will be either handed out or posted on the Bb and discussed in the beginning of class. There will be a little time allocated for working on and discussing projects in class, however time outside of class will be needed to complete the projects.
- The project will ask you to take material covered in class apply it to real world problems and analyze the findings. The purpose of the project is to help support and increase your understanding of the material through group discussions and through analysis of real world problems.

Attendance/Participation:

- Refer to the Attendance/Participation & Expectations Guideline

Assignments/Journals:

- Assignments will be provided via Blackboard (Bb) or handouts in class. You will be responsible for reviewing the questions and completing the problems. Homework assignments may be collected.
- Journals will be records of your thinking throughout the semester.

Exams/Quizzes:

- Exams/Quizzes will be handed out in class to evaluate your understanding of the material after discussing and reviewing the materials.
- The exam is closed book and closed notes. You may **NOT** use your book or notes during the exams/quizzes.
- Calculators are allowed. You may **NOT** share your calculator with your classmates during the exams/quizzes.

IMPORTANT LINKS TO REVIEW:

Academic Integrity Policy Statement Link

Students with Disabilities Link

Tutorial and Instructional Programs

RIGHTS OF FACULTY:

**** I reserve the right to modify and update this syllabus****

DAY	TOPIC	ASSIGNMENTS	DUE
27-Aug	Introduction to GSR104 & MML	Read Prologue and Unit 1E	29-Aug
29-Aug	Unit 1E - Critical Thinking in Everyday Life	Unit 1E (MyMathLab) Unit 1E Journal Read Unit 3A	5-Sep
3-Sep	**LABOR DAY – NO CLASSES**		
5-Sep	Unit 3A - Uses and Abuses of Percentage	Unit 3A (MyMathLab) Unit 3A Journal	10-Sep
10-Sep	Introduction to Excel and APA Citation	Select 3 topics for Unit 1E and 3A Project **Unit 1E and 3A Project**	12-Sep **19-Sep**
12-Sep	Test #1 Review - Unit 1E and 3A	**STUDY for Test #1** **Unit 1E and 3A Project**	**17-Sep** **19-Sep**
17-Sep	**TEST #1**	**Unit 1E and 3A Project**	**19-Sep**
19-Sep	**Presentation: Unit 1E and 3A Project**	Read Unit 4A	24-Sep
24-Sep	Unit 4A - Taking Control of Your Finances	**Unit 4A (MyMathLab)** **Read Unit 4B**	**26-Sep**
26-Sep	Unit 4B - The Power of Compounding	Unit 4B (MyMathLab) Read Unit 4C	1-Oct
1-Oct	Unit 4C - Savings Plan and Investments	Unit 4C (MyMathLab) Read Unit 4D	3-Oct
3-Oct	Unit 4D - Loan Payments and Credit Cards	Unit 4D (MyMathLab) Unit 4D Journal **Finance Project**	8-Oct **15-Oct**
8-Oct	Test #2 Review - Unit 4A, 4B, 4C, and 4D	**STUDY for Test #2** **Finance Project**	**10-Oct** **15-Oct**
10-Oct	**TEST #2**	**Finance Project** Read Unit 5B	**15-Oct**
15-Oct	Unit 5B - Should You Believe a Statistical Study?	Unit 5B (MyMathLab) Unit 5B Journal Read Unit 5A	17-Oct
17-Oct	Unit 5A - Fundamentals of Statistics	Unit 5A Part 1 (MyMathLab) Unit 5A Journal	22-Oct
22-Oct	Unit 5C - Statistical Tables and Graphs Unit 5D - Graphics in the Media	Unit 5C and Unit 5D (MyMathLab)	24-Oct
24-Oct	Unit 6A - Characterizing the Data	Unit 6A (MyMathLab) Unit 6A Journal Read Unit 6B	29-Oct

DAY	TOPIC	ASSIGNMENTS	DUE
29-Oct	Unit 6B - Measures of Variation	Unit 6B Part 1 (MyMathLab)	31-Oct
31-Oct	Unit 6B - Measures of Variation	Unit 6B Part 2 (MyMathLab) Read Unit 6C	5-Nov
5-Nov	Unit 6C - The Normal Distribution	Unit 6C (MyMathLab) Unit 6C Journal **Statistics Project**	7-Nov **15-Nov**
7-Nov	Test #3 Review - Unit 5A, 5B, 5C, 5D, 6A, 6B, and 6C	**STUDY for Test #3** **Statistics Project**	**12-Nov** **15-Nov**
12-Nov	**TEST #3**	**Statistics Project**	**15-Nov**
14-Nov	Statistics Project In-Class Feedback	Statistics Project	**15-Nov**
19-Nov	**THANKSGIVING BREAK - NO CLASSES**		
21-Nov	**THANKSGIVING BREAK - NO CLASSES**		
26-Nov	Unit 1C - Sets and Venn Diagrams	Unit 1C (MyMathLab) Unit 1C Journal Read Unit 7A	28-Nov
28-Nov	Unit 7A - Fundamentals of Probability	Unit 7A (MyMathLab) Unit 7A Journal (Discussion) Read Unit 7B **Probability Project**	3-Dec **10-Dec**
3-Dec	Unit 7B - Combining Probabilities	Unit 7B (MyMathLab) Unit 7B Journal (Discussion)	5-Dec
5-Dec	Probability Project	**Probability Project**	**10-Dec**
10-Dec	Final Exam Review	**STUDY for Final Exam**	**12-Dec**

FINAL EXAM:

DATE: Wednesday, December 12th 2012
TIME: 3:30pm – 5:30pm
ROOM: HMB S136

http://www.gallaudet.edu/final_exam_schedule.xml