MAT 1190 Quantitative Reasoning (3 cr) Spring 2015 v2

Course Meetings: MW N714
        D174 2:30-3:45 PM
        D178 4:00-5:15 PM

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Office Hours (in N726): M 1:30-2:30 and Th 2 - 3 and by apt

Course Description: As a student, you will develop and apply mathematical, logical, critical thinking, and statistical skills to solve problems in real-world contexts. You will acquire skills in the fields of algebra, geometry, probability, statistics, and mathematical modeling. You will also have opportunities to develop your reading, writing, oral, and listening skills.
Prerequisite: CUNY Proficiency in reading and mathematics. (Credit will not be given for both MAT 1190 and any one of the following courses: MAT 1175, MAT 1180.)

Text: *Math in Our World,* 3e by Dave Sobecki and Allan G. Bluman, McGraw Hill Education
NOTE: You might consider renting $47 or smartbook $83. At THE VERY LEAST, acquire the 2nd edition for $22 used. DO NOT THINK you will pass the course without doing homework!
Scientific Calculator is required (a graphing calculator is better but more expensive).

Course Specific Student Learning Outcomes: At the end of the semester, students will be able to
1. Apply mathematical, logical, critical thinking, and statistical skills to solve problems in real-world contexts.
2. Represent mathematical information symbolically, visually, numerically, and verbally.
3. Estimate mathematical quantities as well as evaluate the accuracy of estimates, and adjust estimates when necessary.
4. Represent and know how to read, collect and organize data in an assortment of appropriate written and graphical forms.
5. Recognize and understand functions as a way of modeling correspondence between two variables (linear and exponential).
6. Describe the behavior of common functions in words, graphically, algebraically and in tables.

General Education Student Learning Outcomes:
1. Understand and employ both quantitative and qualitative analysis to solve problems.
2. Employ scientific reasoning and logical thinking.
3. Communicate effectively using written and oral means.
4. Use creativity to solve problems.

Academic honesty: Students and all others who work with information, ideas, texts, images, music, inventions, and other intellectual property owe their audience and sources accuracy and honesty in using, crediting, and citing sources. As a community of intellectual and professional workers, the College recognizes its responsibility for providing instruction in information literacy and academic integrity, offering models of good practice, and responding vigilantly and appropriately to infractions of academic integrity. Accordingly, academic dishonesty is punishable by penalties, including failing grades, suspension, and expulsion. The complete text of the College policy on Academic Integrity may be found in the catalog. **During an exam, if you show someone else your work, you will be treated in the same way as the person who copies. It is your responsibility to cover your work**

Attendance: You may miss no more than 3 classes. Lateness between 0 and 30 minutes counts as 1/2 absence. Lateness > 30 minutes counts as full absence. Once in class, stay for the full period; if you *leave early* without making prior arrangements, *you will be marked as absent*. Students who have been excessively absent and failed the course at the end of the semester will receive a WU grade if they have attended the course at least once. Every withdrawal (official or unofficial) can affect a student's financial aid status.

Cell phones: Please turn *off* and place out of sight. If you are expecting an important call, you may place your phone in vibrate mode and sit next to the door to take the call. If the instructor sees or hears a phone, he may ask that you hand it to him for the duration of class.

Set enough time aside each week: You are expected to spend **6 hours** outside the classroom each week reading the text, doing homework and preparing for exams.

Time **problems?** Here is a **damage control priority list:**
1. *Read the section prior to the class in which it is covered.* This reading will facilitate your understanding and participation in class.
2. *Attempt at least some of the homework problems immediately after class,* so that you know how much of the class you understood.
3. *Take advantage of office hours:* If you are unable to attend the scheduled hours, make an appointment.
4. *Make use of the Atrium & Voorhees Learning Centers (approximately 9AM-8PM, M-Th, shorter hours on F & Sat):* While some of the tutors are advanced undergraduate students, many are adjunct faculty.

Grade components
Class participation (25%): Generally you will earn from 3-5 points for each assignment (3 = perfunctory participation, 4 = significant thought & effort, 5 = extraordinary thought & effort). The openlab assignments are (there will be inclass assignments as well)
- Join and make a posting by W 2/11 explaining how mathematics relates to your career (include photo of yourself with some aspect of mathematics and/or your career in the background).
- Make a 2nd posting by W 4/1 focusing on a graph which appears in a newspaper. You must include a short summary of the newpaper or magazine article, a reproduction of the graph and a description of how the graph was used in the article.
- You will be randomly assigned to another student's posting. Please comment on his/her graph posting as well as create and solve a word problem based on the graph (deadline: W 4/22).

Semester Project (extra 15%): More details will be forthcoming.

Exam's I & II (20% each, 40% total): A sample exam will be posted one week prior to the exam.

Quizzes (10%): At the beginning of each class, a quiz will be given based on the homework and the material presented in the previous class as well as the reading for the present class.

Final Exam (25%): A sample exam is available on the department website as well as in the dept. office. If you miss the final exam and have been failing the course, you will receive an F (or WU if you have >3 absences). Otherwise, if you have a documented illness or emergency, you will have an opportunity to take a makeup final exam probably in June for a small fee.

Grade scale:

93 – 100	A		77 – 79.9	C+
90 – 92.9	A-		70 – 76.9	C
87 – 89.9	B+		60 – 69.9	D
83 – 86.9	B		0 – 59.9	F
80 – 82.9	B-			

Homework Sheet and Schedule

Cl	D	Date	sec	Topics	Homework	Pages
1	W	1/28	6.2	linear equations	p.315(299): 37-61 odd, 85-91 odd	p.304-312: ex.1-10
			6.3	applications of linear eqtns	p.323(306): 35, 39, 41, 45, 47	p.317-320: ex.1-3
2	M	2/2	6.4	ratio, proportion & direct var	p.334(317): 21-25 odd, 29-39 odd, 53, 55	p.325-332: ex.1-9
3	W	2/4	6.5	linear inequalities	p.344(326): 25-35 odd, 47-53 odd, 73, 77, 85	p.337-344: ex.1-7
4	M	2/9	7.2	systems of linear equations	p.393(372): 21-25 odd, 33-41 odd, 59, 63, 71	p.382-392: ex.1-11
5	W	2/11	1.1	mathematical reasoning	P. 12(12): 1, 5, 7, 9, 13, 15, 17, 21, 27, 43-49 odd	p.4-12: ex.1-10
6	W	2/18	1.2	estimation & graphs	P. 23(23): 5, 9, 13, 17, 21, 33-41 odd, 49, 51, 53, 55, 61, 63, 65	p.16-23: ex.1-7
7	M	2/23	3.1	statements/quantifiers	P. 105(98): 5-11 odd, 17, 21, 27, 29, 41, 43, 53, 55, 65, 67,69,85,87,91	p.98-105: ex.1-5
8	W	2/25	3.2	truth tables	P. 118(113): 1, 5, 9, 13, 17, 21, 25, 29, 33, 35, 37, 41-51 odd	p.107-117: ex.1-5
9	M	3/2	8.1	percents	p.449(427): 3, 7-35 odd, 37, 41-47 odd, 53, 59, 63, 65, 67, 73	p.442-449: ex.1-11
10	W	3/4	8.2	simple interest	p.459(435): 1-25 odd, 35, 37, 39, 43, 47, 49, 51, 69	p.454-457: ex.1-7
11	M	3/9	8.3	compound interest	p.471(444): 1-11 odd, 21-39 odd, 65, 69	p.462-466: ex.1-6
12	W	3/11		Exam I		
13	M	3/16	11.3	basic probability	p.643(594): 2-6, 11-45 odd	p.636-643: ex.1-4
14	W	3/18	11.4	tree diagrams, tables	p.652(602): 3-17 odd, 21, 23	p.647-652: ex.1-5
			12.1	gather/organize data	p.707(655): 1-3, 9, 11-12, 15-16, 18-23, 28, 39-41	p.700-705: ex.1-3
15	M	3/23	12.2	picture data	p.715(663): 5, 11, 17, 21, 27, 29	p.710-715: ex.1-5
16	W	3/25	12.3	measures of average	p.726(673): 6-10, 14, 22, 23, 25, 29, 31-34	p.718-726: ex.1-9
17	M	3/30	12.4	measures of variation	p.734(679): 1-3, 8, 14, 15, 21, 27, 30	p.729-733: ex.1-4
18	W	4/1	12.5	measures of position	p.740(684): 1, 2, 5, 7, 16, 21, 22, 27, 28, 31-33	p.736-740: ex.1-5
19	M	4/13		Exam II		
20	W	4/15	12.6	normal distribution	p.749(692): 1, 3, 4, 5, 11-41 odd	p.742-749: ex.1-5
21	M	4/20	12.8	correlation and regression	p.769(708): 1, 2, 3, 7, 11, 13, 15, 19, 21, 23	p.759-768: ex.1-5
22	W	4/22	9.1	length & unit conversions	p.527(488): 7-17 odd, 19-55 every 4th, 59-65 odd	p.520-527: ex.1-8
23	M	4/27	9.2	area, volume & capacity	p.536(497): 7, 11, 15, 21, 25, 29, 33, 37, 41, 45,49,53,55,59,65,69,71,73	p.529-536: ex.1-11
24	W	4/29	9.3	weight & temperature	p.544(503): 7, 9, 28, 29, 31, 32, 47, 49, 53, 33, 65, 70, 78, 79, 81, 82, 84	p.539-543: ex.1, 3-4, 6-7
25	M	5/4	10.1	points,lines,planes & angles	p.559(519): 1-18 all, 19-31 odd, 35-39 odd, 51, 53, 55	p.552-559: ex.1-6
26	W	5/6	10.2	triangles	p.568(528): 1, 2, 3, 6, 11-16 all, 17-27 odd, 31, 32, 41, 42, 46, 49, 52, 54	p.561-568 ex.1-6
27	M	5/11	10.3	polygons and perimeter	p.575(534): 1, 2, 5, 13-20 all, 22, 25, 26, 35, 37, 40, 44	p.572-575: ex.3, 4
			10.4	areas of polygons & circles	p.584(542): 1-3 all, 7-14 all, 17, 18, 27-33 odd, 39, 41, 43, 44, 52, 54	p.578-584: ex.1-3, 5, 6
28	W	5/13		semester project present		
29	M	5/18		review		
30	W	5/20		final exam		