

Quantitative Reasoning

MAT 130 IS50

Spring 2020

Number of Credits: 4 credits

Connect Math Code: 33YJL-FYDWY

Days Class Meets: Tuesdays and Thursdays

Connect Math Site: www.connectmath.com

Meeting Times: 6:00 pm - 7:50 pm

Contact Email: GemalskBrianD@jccmi.edu

Location/Venue: Online/JetNet/Big Blue Button

Online Office Hours: 8:00 pm – 9:00 pm T/TR
And By Appointment

Instructor: Brian Gemalsky

Course Description

Quantitative Reasoning develops student skills in analyzing, synthesizing and communicating quantitative information. Cultivates algebraic reasoning and modeling skills through a quantitative literacy lens. Emphasizes critical thinking and the use of multiple strategies in applied contexts. Topics include proportional and statistical reasoning, probability, and evaluation of bias and validity.

Prerequisite(s)

MAT030 or MAT040

Course Goals

Quantitative Reasoning is not your traditional lecture course. Expect to be discovering concepts, solving problems, working collaborative in small groups, and sharing ideas with the whole class. Also, expect to read challenging mathematical content every day. Your instructors will be guiding and supporting along the way, but rarely will they spoon feed the answers. Be prepared to discover that you are good at math and your contributions to the class matter.

Course Objectives

All courses at Jackson Community College address one or more of the institutionally defined General Education Outcomes (GEOs) or Essential Competencies (ECs). Math 130 contributes to GEO 3: Demonstrate computational skills and mathematical reasoning. <https://www.jccmi.edu/academic-deans/student-assessment/general-education-ado/>

Students will be able to:

1. reason, model, and draw conclusions or make decisions with mathematical, statistical, and quantitative information.
2. interpret and communicate quantitative information and mathematical and statistical concepts using language appropriate to the context and intended audience.
3. critique and evaluate quantitative arguments that utilize mathematical, statistical, and quantitative information.
4. increase comfort and facility with numeracy, the processes and skills of mathematics.
5. experience mathematical challenges and use the tools required to persist and succeed through them.
6. use appropriate technology in a given context.
7. draw conclusions and/or make decisions based on analysis and critique of quantitative information using ratios or proportional reasoning.
8. draw conclusions and/or make decisions by analyzing and/or critiquing mathematical models, including situations for which the student must recognize underlying assumptions and/or make reasonable assumptions for the model.
9. apply probabilistic reasoning to draw conclusions, to make decisions, and to evaluate outcomes of decisions.
10. draw conclusions or make decisions and communicate their rationale based on understanding, analysis, and critique of self-created or reported statistical information and statistical summaries.

Textbook (chose appropriate options below)

- Textbook Zero: An online version of the text is included in Connect Math
- Coursepack & Connect Math Student Access sent to you from the bookstore

Extras

- LARGE 3-ring binder for this class ONLY!
- Writing materials - LARGE eraser, pencils, highlighters, etc.
- Required Technology
 - **Laptop/Computer with Camera**, accessing school work through your mobile device will NOT be sufficient for the semester.
 - Ti-84 calculator **OR** access to Desmos on technology
- **Please note: Access to a computer with Internet is required for this section of Math 130.** We will be doing homework, projects, and possibly some quizzes online.
- **All lessons will be taught (Synchronized) using Big Blue Button through JetNet on Tuesdays and Thursdays from 6:00 pm – 7:50 pm. Big Blue Button sessions will be recorded and made available on JetNet.**

Exam Process

Students will be required to take exams online and also, but not limited to paper and pencil to be uploaded to the instructor by Desmos App or as a PDF attachment via email, at the instructor's discretion.

Grading Procedure

- **Connect Math Homework (online):** For each lesson covered, a set of online questions will be assigned. Students will have a week to complete the assignment for full credit. No late work is accepted.
- **Worksheets/Classwork:** Worksheets will be given periodically after each lesson. These are to be completed and uploaded into the JetNet course for grading and feedback by the due date.
- **Exams:** An exam will be administered after each unit. Exams can be completed either online, submitted through Desmos and or scanned and sent to the instructor as a PDF in JetNet. Students will be notified which format the instructor is requesting from them. Students are allowed at least one double sided reference sheet of handwritten notes for each exam. Being absent for an exam without prior arrangements will result in a zero on the exam. In unforeseen emergencies official documentation is required to be allowed to make up the exam.
- **Cumulative Final Exam:** A cumulative final exam covering all four units will be administered on the last day of the course. Students are allowed each handwritten reference sheet from the unit exams and a fifth sheet written specifically for the final exam. Missing the final will result in a zero on the final exam. The format of the final exam can be online, written, sent through Desmos, or a combination of these. Students will be notified before the day of the final.

Extra Credit Policy: There will be no opportunities for extra credit. Your grade is based on your performance in class, not on extras.

Grading Scale

GPA	GRADE RANGE	ASSIGNMENT WEIGHTS
4.0	90-100%	Exam 1: 12.5%
3.5	85-89%	Exam 2: 12.5%
3.0	80-84%	Exam 3: 12.5%
2.5	75-79%	Exam 4: 12.5%
2.0	70-74%	Online CM Homework: 15%
1.5	65-69%	Worksheets: 15%
1.0	60-64%	Cumulative Final Exam: 20%
0.5	50-59%	
0.0	0-49%	

Failure

A 2.0 or "C" is a passing grade. Only courses with passing grades count toward graduation. Other colleges transfer in only courses with passing grades. Many financial aid sources, including most employers, require passing grades. Additionally, earning less than a 2.0 in a class results in being unable to participate in the next level of courses in a discipline which requires this course as a prerequisite. Registering for the next course sequence without passing the prerequisite course may result in you being dropped from that class.

Academic Honesty Policy

Academic Honesty is defined as ethical behavior that includes student production of their own work and not representing others' work as their own, by cheating or by helping others to do so.

Plagiarism is defined as the failure to give credit for the use of material from outside sources.

Plagiarism includes but is not limited to:

- Submitting other's work as your own
- Using data, illustrations, pictures, quotations, or paraphrases from other sources without adequate documentation
- Reusing significant, identical or nearly identical portions of one's own prior work without acknowledging that one is doing so or without citing this original work (self-plagiarism)

Cheating is defined as obtaining answers/material from an outside source without authorization. Cheating includes, but is not limited to:

- Plagiarizing in any form
- Using notes/books/electronic material without authorization
- Copying
- Submitting others' work as your own or submitting your work for others
- Altering graded work
- Falsifying data
- Exhibiting other behaviors generally considered unethical

Allowing your work to be submitted by others

Accessibility

Jackson College understands that cultivating a broadly diverse community is crucial to our educational mission and to our foundational commitment to leadership and service. Jackson College is fully committed to ensuring our courses are accessible to everyone including those with disabilities. We are currently working to increase accessibility and usability of our course materials in order to meet or exceed the requirements of Section 508 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1991 and Web Content Accessibility Guidelines (WCAG) 2.0. For more information about Jackson College's efforts to ensure accessibility please visit the [Jackson College accessibility web page](#).

If you have an accessibility need in any of our classes please e-mail the Center for Student Success at JCCSS@jccmi.edu or visit the [Center for Student Success web page](#).

At the Center for Student Success (CSS), we are committed to providing all students the opportunity to achieve academic success by providing a variety of support services free of charge to Jackson College students. This includes, but is not limited to, peer and faculty tutoring, mental health referral, temporary assistance with transportation, various workshops/seminars, and the TRIO program.

In addition, the CSS staff is committed to adapting the College's general services to meet the individual needs of otherwise qualified students with disabilities, for the purpose of providing equal access to all programs and facilities.

Course Management

Incompletes Policy: (Excerpt from JCC Policy) "A student may request an incomplete from the instructor. The incomplete will be granted only if the student can provide documentation that his or her work up to that point is sufficient in quality, but lacking in quantity, due to circumstances beyond the student's control. Furthermore, a written plan for making up the missing work within one semester must be completed by the student. Final determination of whether an incomplete will be given is the instructor's decision."

Makeup Policy

Students can make up assignments if the instructor is given notification before the assignment is due and consents to allow the student to make up the assignment. Final exams are the only assignment that will not be allowed to be made up.

Help

Available learning services or opportunities for students seeking help with their course work. May include information about tutors, learning centers, reserved library materials, counseling services.

Academic Advising

It is important to contact a Center for Student Success professional prior to the start of the semester in order to receive accommodations in a timely manner. While we will make every effort to coordinate accommodations in a timely manner, failure to self-identify prior to the start of the semester may delay notification to instructors and timeliness of acquiring accommodations.

Accommodations do not automatically carry over to the next semester. Please e-mail JCCSS@jccmi.edu or visit the [Accommodations for Students with Disabilities](#) web page

Student Responsibilities

Students are expected to complete all requirements of this course. It is up to the students to make all necessary accommodations to complete assignments by the due date. Students who are not able to attend the synchronized teaching sessions will need to access the corresponding videos for the class sessions that they will not be able to attend. A student resources page will be given to students via email at the start of class.

Attendance- Participation Policy

For online sections:

Just as in a traditional classroom course, regular class participation and keeping up on the reading and assignments is strongly correlated with survival in college. It is my recommendation that you plan to do your assignments and take your exams BEFORE the last day they are due. If problems occur, there is time to fix them before the deadline.

In compliance with Federal Title IV funding requirements, as well as college initiatives, I will be monitoring student participation on a regular basis and officially reporting student activity throughout the term to assure compliance with college policy and federal regulations. It is imperative that you log in to the course and actively participate *within the first couple days of the term* to validate your enrollment in the course.

After that, not actively participating in class may result in you being withdrawn from the course. Being withdrawn from a course can have an impact on financial aid, billing, athletic eligibility, and housing status. As a college student you are responsible for how your participation impacts your academic progress; the accountability lies with you. A more detailed description of non-participation in the course is in the absence policy section of this syllabus.

Jetstream Daily Attendance will be counted by the following: For a student to be counted as Present for a class session they need to either:

- **Attend a Big Blue Button session or**
- **Complete that week's CM assignments**

Failure to do either of these activities in any given week without expressed consent via email by the instructor will result in being dropped or withdrawn from the course for non-participation. If an absence is unavoidable, it is the student's responsibility to learn the material missed. Also, since, no late work is accepted, it is up to the student to make sure the instructor allows them to make up any missed assignment from an instructor approved excused absence.

Caveat

The instructor reserves the right to make changes to the syllabus as the instructor deems necessary. All herein is subject to change, but not without notice.

Calendar

Calendar timelines and assignments are an approximation and can be changed.

Week	Class Day	Day	Date	Unit.Lesson	Suggested problems
1	9-Jun	M	8-Jun		Syllabus, Groups, Ice-Breakers, Connectmath
				1.1	p. 3 #1-13 p.8 #1-13, p. 14 #1-7
		T	9-Jun	1.2	p. 18#3-7, p.23 #2-7
	11-Jun	W	10-Jun	1.3	p. 32 #3-6, p.35 #1-5, p.38 #15-17
				1.4	p. 45 #1-7, p.48 #20 p.49 pick a couple
		TR	11-Jun	1.5	p. 58 #2-7, p.60 #1-4, p. 61 #5-16 p.66 #1-9 (time permitting)
				1.6	p. 70 #1-8, p. 73 #1-15
		1.7	p. 82 #1-49, p. 88 #1-10 need a measuring device. (optional)		
2	16-Jun	M	15-Jun	1.8	p. 96 #1-8, p. 100 #1-11
		T	16-Jun		Review
	W	17-Jun		Exam 1	
	18-Jun	TR	18-Jun	2.1	p. 112 #1-11 p.115 #1-5, p. 116 #6-19, p.120 #1-4(pick one or two) #5 is messed up
				2.2	p. 123 #1-9, p.125 #1-6, p.127 #7-16 p.130#1-10(pick one or two if time permits)
3	23-Jun	M	22-Jun	2.3	p. 133 #1-20, p.141 #1-13 show how to use ti-84 to create a graph
		T	23-Jun	2.4	p. 151 #2-13 show calculator use, p. 158 #1-14
				2.5	p. 165 #1-11, p. 169 #1-11
	25-Jun	W	24-Jun	2.7	p. 192 #1-7
		TR	25-Jun		Review
				Exam 2	
4	30-Jun	M	29-Jun	3.1	p. 206 #1-4 p.208 #1-8, p. 210 #1-7 p. 214 #1-9(time permitting)
		T	30-Jun	3.2	p. 218 #1-8 p. 221 #1-8, p. 223 #9-21 (formalize: $P=Ae^{rt}$)
	W	1-Jul	3.3	p. 233 #1-13, p. 240 #1-21	
	TH	2-Jul	3.4	p. 251 #1-18, p. 258 #1-12	
5	7-Jul	M	6-Jul	3.5	p. 267 #1-16, p. 273 #1-7, p. 278 #1-12(time permitting)
		T	7-Jul	3.6	p. 283 #1-7 p. 288-295(pick one or two)
	W	8-Jul		Review	
	TH	9-Jul		Exam 3	
6	14-Jul	M	13-Jul	4.1	p.299 #1-24
		T	14-Jul	4.4	p. 352 #1-14, p. 356 #1-14, p. 361 #15-24 p. 368 # 4 (histogram)
	W	15-Jul	4.5	p. 371 #1-18, p. 379 # 1-6, p. 384 pick some	
	TH	16-Jul	4.6	p. 390 #1-4 p. 394 (formula) p. 396 #1-10	
7	21-Jul	M	20-Jul	4.7	p. 405 #1-17, p. 411 #1-17
		T	21-Jul		Review/ Exam 4
	W	22-Jul		Review	
	23-Jul	TH	23-Jul		Final Exam

Important Dates:

DATE	EVENT
JUNE 9, 2020	FIRST DAY OF CLASS
JUNE 12, 2020	CENSUS DATE
JULY 4, 2020	INDEPENDENCE DAY
JULY 21, 2020	LAST DAY TO WITHDRAW
JULY 23, 2020	FINAL EXAM
JULY 24, 2020	GRADES ARE DUE