Math 130.81 Quantitative Reasoning
(The Co Requisite Edition, 4 credits)

Lead Instructor: Sara Main		Co-Instructor: Robert Lombrana	
E-mail:	mainsaral@jccmi.edu	E-mail:	Mosserlisam01@jccmi.edu
Office:	JM 253	Office:	JM 150
Phone:	831-238-9785	Phone:	
Office Hours:	Posted outside of office	Office Hours:	TBA

Course Information	
Connect Math Website:	https://www.connectmath.com
Connect Math Course ID:	RA9WK–MKPU4
Class Time/Location:	Monday-Thursday 8-8:55am room 12

Required Materials:
- Textbook Zero: An online version of the text is include in Connect Math
- Coursepack & Connect Math Student Access (picked up at the bookstore)
- LARGE 3-ring binder for this class ONLY!
- Writing materials - LARGE eraser, pencils, highlighters, etc.
- Required Technology
    - **Laptop** with **Excel** (free download via your JC account) or google docs access
    - Ti-84 calculator
- **Please note**: **Access to a computer with Internet is <u>required</u> for this section of Math 130.** We will be doing homework, projects, and possibly some quizzes online, outside of class. School computers can be used to satisfy these requirements.

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.

Co-requisite: Must be concurrently enrolled in MAT040
Prerequisite: 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.
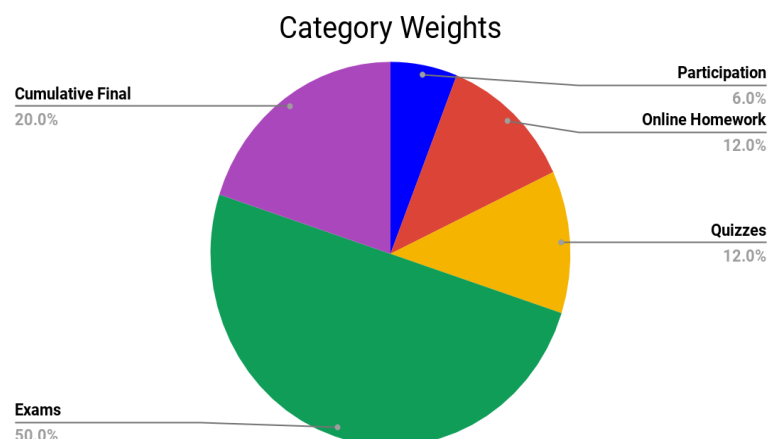*Math 130 Core Course Objectives:* Students will be able to:

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.

General Education Outcomes & Essential Competencies: 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/

Grading Information: 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.

Grading Scale:		Grading Policy:
90 -100%	**4.0**	**Class Participation:** 6%
85 - 89%	**3.5**	**Online CM Homework:** 12%
80 - 84%	**3.0**	**Quizzes:** 12%
75 - 79%	**2.5**	**Exam 1:** 12.5%
70 - 74%	**2.0**	**Exam 2:** 12.5%
65 - 69%	**1.5**	**Exam 3:** 12.5%
60 - 64%	**1.0**	**Exam 4:** 12.5%
50 - 59%	**0.5**	**Cumulative Final:** 20%
0-49%	**0.0**	

Category Weights

Cumulative Final
20.0%

Participation
6.0%

Online Homework
12.0%

Quizzes
12.0%

Exams
50.0%

<u>*Course Assignments*</u>
- **Connect Math Homework (online):** For each lesson covered, an online set of question will be assigned. Students will have a week to complete the assignment for full credit. Assignments may be completed late with a 10% penalty.
- **Participation:** The participation grade will be calculated from attendance and notebook checks
  - **Attendance:** The attendance portion of the grade will be total class sessions attended divided by total class sessions.
  - **Notebook Check:** At the beginning of each class period students will show their written work to an instructor from the previous lesson. Before each exam students will meet with the instructor and discuss their progress & preparation for the exam. Students will receive a grade for completing the in class textbook and meeting with the instructor.
- **Worksheets/Quizzes/Classwork:** Worksheets will be given periodically after each lesson. These worksheets might be completed during class or sent as homework.
- **Exams:** An exam will be administered after each unit. Students will be allowed a double side 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.

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

<u>*Absence Policy:*</u> Due to the collaborative format of the course, students are expected to attend every class session. Attendance is taken each session and included in the final grade calculation. If an absence is unavoidable, it is the student's responsibility to learn the material missed. This material includes completing the course content in the textbook, working through the online assignments, and requesting/completing by the due date any worksheets. Since no late work is accepted, missing class results in zeros for all assignments due that day.

<u>*Important Dates:*</u>

Date	Event
January 14, 2019	Day and evening classes begin
Jan. 14 – May 5, 2019	Semester Dates
February 1, 2019	In-Service Day. No classes
March 11-17, 2019	Spring Break. No classes

May 5, 2019	End of Fall Semester
May 7, 2019	Grades Due

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."

Intermediate Grading: In compliance with Federal Title IV funding requirements, as well as college initiatives, reporting of student participation in classes will occur at three designated times each semester. Instructors will assign one of three non-transcripted letter symbols to each student during each reporting period (see below). Students identified as no longer participating will be dropped or administratively withdrawn from the class, and students identified as needing academic assistance will be contacted.

Participation/Progress Symbols

> H – The student is not doing acceptable work and needs **H**elp to be successful.
>
> Q – The student has not participated and the instructor believes they have unofficially withdrawn(**Q**uit). These students will be dropped/withdrawn from the class.
>
> V – The instructor **V**erifies that the student is participating and doing acceptable *work.*

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

Classroom Behavior Policy:

Instruction for this course occurs primarily from group and whole class discussions. It is expected the students and instructors will have different ideas. For the classroom to function effectively individuals and their ideas will be both heard and respected. Specific classroom behaviors will be determined collectively on the first day of class. Students are expected to follow the agreed guidelines for

maintaining a safe and productive environment.

Where to Get Help…

Office Hours: Office hours are there for you to come get help. Please come and see me if you need questions answered. Remember, though, that office hours are not a replacement for attending class.

Center for Student Success: The Center for Student Success has tutoring available for free to students enrolled in Math 130. You can get help with take-home work, Connect Math homework, and more. The Center is located in Bert Walker Hall.

Connect Math: There are videos for all the "did you get it questions" as well as ungraded practice questions for each unit. These materials are found under the resources tab.

Each Other: Use your classroom groups as study groups and meet outside of class. The secret to success in higher education is working with your peers to master challenging material.

Day	Date	Unit.Lesson	Unit Title
M	14-Jan		Syllabus, Groups, Ice-Breakers, Connectmath
T	15-Jan	1.1	Analyze and evaluate percents
W	16-Jan	1.1	
TR	17-Jan	1.1	Finish Section
M	21-Jan	1.2	p. 18#3-7, p.23 #2-7
T	22-Jan	1.3	p. 32 #3-6, p.35 #1-5, p.38 #15-17
W	23-Jan	1.4	p.45 #1-7, p.48 #20 p.49 pick a couple
TR	24-Jan	1.5	p. 58 #2-7, p.60 #1-4
M	28-Jan	1.5	p.61 #5-16 p.66 #1-9 (time permitting)
T	29-Jan	1.6	p. 70 #1-8
W	30-Jan	1.6	p. 73 #1-15
TR	31-Jan	1.7	p. 82 #1-49
M	4-Feb	1.7	p. 88 #1-10 need a measuring device. (optional)
T	5-Feb	1.8	p. 96 #1-8
W	6-Feb	1.8	p. 100 #1-11
TR	7-Feb		Review
M	11-Feb		Exam 1
T	12-Feb	2.1	p. 112 #1-11 p.115 #1-5
W	13-Feb		p. 116 #6-19, p.120 #1-4(pick one or two) #5 is messed up
TR	14-Feb	2.2	p. 123 #1-9, p.125 #1-6
M	18-Feb		p.127 #7-16 p.130#1-10(pick one or two if time permits)
T	19-Feb	2.3	p.133 #1-20
W	20-Feb		p.141 #1-13 show how to use ti-84 to create a graph
TR	21-Feb	2.4	p.151 #2-13 show calculator use
M	25-Feb		p. 158 #1-14
T	26-Feb	2.5	p. 165 #1-11
W	27-Feb		p. 169 #1-11
TR	28-Feb	2.6	p. 179 #1-8 (need golf balls, measuring device, and tape)
M	4-Mar		p.188 #1-8
T	5-Mar	2.7	p. 192 #1-7
W	6-Mar		Review
TR	7-Mar		Exam 2
M	11-Mar		
T	12-Mar		Spring Break (No Classes)
W	13-Mar		
TR	14-Mar		

M	18-Mar	3.1	p. 206 #1-4 p.208 #1-8
T	19-Mar		p. 210 #1-7 p. 214 #1-9(time permitting)
W	20-Mar	3.2	p. 218 #1-8 p. 221 #1-8
TR	21-Mar		p. 223 #9-21 (formalize: P=Ae^rt)
M	25-Mar	3.3	p. 233 #1-13
T	26-Mar		p. 240 #1-21
W	27-Mar	3.4	p. 251 #1-18
TR	28-Mar		p. 258 #1-12
M	1-Apr	3.5	p. 267 #1-16
T	2-Apr		p. 273 #1-7, p. 278 #1-12(time permitting)
W	3-Apr	3.6	p. 283 #1-7 p. 288-295(pick one or two)
TR	4-Apr		Review
M	8-Apr		Review
T	9-Apr		Exam 3
W	10-Apr	4.1	p.299 #1-24
TR	11-Apr	4.4	p. 352 #1-14, p. 356 #1-14
M	15-Apr		p. 361 #15-24 p. 368 # 4 (histogram)
T	16-Apr	4.5	p. 371 #1-18
W	17-Apr	4.5	p. 379 # 1-6, p. 384 pick some
TR	18-Apr	4.6	p. 390 #1-4 p. 394 (formula) p. 396 #1-10
M	22-Apr	4.7	p. 405 #1-17
T	23-Apr		p. 411 #1-17
W	24-Apr		Review
TR	25-Apr		MAT 130 Exam 4
M	29-Apr		Review (MAT130 and 040)
T	30-Apr		MAT040 Final
W	1-May		Review MAT 130 Final
TR	2-May		MAT 130 Final Exam