

MAT 033.PPI1– Algebra for Statistics

Course Syllabus (Spring 2021)

Number of Credits: 4

Instructor:

JPAY Email Address:

Course to be delivered via Distance Learning

Required Materials:

MAT 033 Course Pack Fall 2020 - Spring 2021

TI-84 Calculator

- ✓ There is no “textbook” for this course, aside from the course pack. However, the probability and statistics portions of the course are based on Sullivan’s 5th Edition of *Statistics: Informed Decisions Using Data*. As this is the text for the required follow-up course (MAT 133), access to this textbook will be very helpful in MAT 033 and beyond.

Strongly Suggested Materials: multi-colored highlighters, pencils, eraser, ruler, sticky notes

Course Description: As an alternative pathway to college-level mathematics, this course introduces fundamental algebraic concepts within an underlying framework of statistics and mathematical modeling based on real-world data. Major concepts and themes include: problem solving and experimental design; unit analysis and error in measurement; dimensional analysis and scientific notation; representing data and coordinate graphing; introduction to basic descriptive statistics and probability theorems; basic geometric principles (area, volume, perimeter); arithmetic operations on numbers, ratios, summations, and percent; solution of formulas; modeling relationships (linear regression); solving equations and inequalities; and function arithmetic and graphing. Appropriate technology includes a graphing calculator.

Prerequisite: Course placement by exam.

Core Course Objectives: Students successfully completing MAT 033 will be able to...

1. Create, interpret, and apply graphical displays of data (histograms, bar & pie charts, dot plots, and stem & leaf displays).
2. Compute, interpret, and apply descriptive measures (mean, mode, median, range, variance, and standard deviation).
3. Use algebraic processes to manipulate formulas, simplify basic algebraic expressions and solve linear equations and inequalities.
4. Demonstrate understanding of functions, independent and dependent variables, number theory, sets, and mathematical notation.
5. Demonstrate understanding of concepts of equations by finding and interpreting appropriate graphs, x - and y -intercepts, and specific function characteristics.
6. Generate and interpret regression models to fit data.
7. Make, interpret, and compute with measurements in scientific notation.
8. Use appropriate technology (i.e., graphing calculator) to enhance understanding of objectives.
9. Demonstrate knowledge and awareness of statistics in scientific arguments and current events.

Course Requirements:

Homework and Discussion Questions: There will be numerous homework assignments that will need to be completed and turned in for credit. Due dates for assignments will be communicated with you through the JPAY system. Discussion questions will be sent weekly through JPAY and responses will be graded as well as used for attendance. Discussion questions will cover big concepts of 033 and understanding of those topics is important for your success in the course.

Projects: There will be two *required* projects for this course that expand on concepts covered and require students to use real-world data and tools. One will involve unit analysis and real-world applications. Another will involve collecting and analyzing qualitative data. These projects are required of all students taking the course.

Exams: Each of the examinations may have cumulative review questions. The final exam is cumulative for the entire course. Students may create a 1-page (both sides) note sheet for use on each exam, and all previous exam note sheets may be used on the final exam.

NOTE: Exams that are submitted without the honesty statement signed will NOT be graded

Course Policies:

Absence Policy: . Students are required to reply to an instructor initiated JPAY every week by Thursday of that week in order to be counted as present in the class. Students are expected to submit all work to be picked up at times decided by Jackson College and your location. If you are unable to return the required assignments it is your responsibility to email your instructor through the JPAY system.

Extra Credit: Math Department policy is that no "extra credit" be part of any MAT course at JC. There will be no opportunities for any *extra* credit beyond the scope of the above requirements.

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 this class will result in you being unable to participate in the next course in the sequence (MAT 133). This will prevent access to any further programs of study and completion of any associate's degree.

Grading Scale:

90 – 100%	4.0
85 – 89%	3.5
80 – 84%	3.0
75 – 79%	2.5
70 – 74%	2.0
65 – 69%	1.5
60 – 64%	1.0
55 – 59%	0.5
0 – 54%	0.0

Grading Weights:

Homework and Discussions: 20%
Exam 1 (<i>Unit 1</i>): 10%
Exam 2 (<i>Units 2-3</i>): 10%
Exam 3 (<i>Units 4-5</i>): 10%
All Projects: 10%
Cumulative Final Exam (<i>Units 1-7</i>): 40%

Incomplete Policy: (Excerpt from JC Policy) “Students may receive an “I” if, at least 90 percent (or as otherwise designated within the course syllabus), of the coursework is completed with an average grade of 2.0 to meet the objectives as specified in the course syllabus. ... The grade of “I” is not awarded to students who did not attend, or seldom attended, or to those who simply are not pleased with their final grades.” <https://www.jccmi.edu/wp-content/uploads/2015/11/1003.pdf>

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 contact your Student Success Navigator if you have an accessibility needs in any of your classes.

Course Management

To withdraw from a course a student must contact their Student Success Navigator. Withdrawing from a course could result in penalties affecting a student's financial aid.

Makeup Policy

Ways that students can manage their enrollment in a course for special circumstances. Includes withdrawal, and audit and incomplete grading procedures.

Academic Advising

It is important to contact your Student Success Navigator 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.

Attendance- Participation Policy

Distance Learning:

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 contact your Success Navigator immediately if you desire to drop or withdraw 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.

Utilizing JPAY Email Services

All JPays are closely monitored by the MDOC. It is expected all communication will be related to the student's education and coursework. No personal information may be shared. Personal information is considered inappropriate and will be flagged. A student may be removed from the Jackson College Corrections Education Program for violation of this policy.

JPays may not include attachments, including photos, videos or other material.

Students will use JPay to communicate with the instructor throughout the semester. The instructor will add the student to their JPay account. This communication may be used to:

The expectations for communication between instructors and students in a specific course are:

- 1) Students will communicate questions or seek clarification on course-related content only
- 2) Students will only share questions related to their own coursework. Other students or their work will not be discussed in JPays.
- 3) Instructors will normally respond to student JPays within 24 business hours.
- 4) Instructors may use JPay to provide feedback to students on course assignments
- 5) Students are expected to use professional communication skills in their JPays to instructors: clear, concise writing; correct spelling and language appropriate to an academic setting.
- 6) Please be sure to put the instructor's last name and course information, i.e. Smith, BUA 100, in the first line of the JPay.

Notice about Dates:

Due to circumstances beyond anyone's control, due dates are subject to change. If a video for a topic is unavailable for viewing before the assignment for that topic is due, you do not have to submit that assignment. Send a JPay letting me know about the issue and submit the assignment at the next work pick up. I will communicate with you about any date changes.

Important Dates:

	CLASSES BEGIN
JUNE 11 TH	1 ST JC PICKUP
JUNE 25 TH	2 ND JC PICKUP
JULY 9 TH	3 RD JC PICKUP
JULY 23 RD	4 TH JC PICKUP
AUGUST 6 TH	5 TH JC PICKUP
AUGUST 20 TH	LAST JC PICKUP – FINAL EXAM & PROJECT

MAT 033 – Flow of course

Topic / Activity
Unit 1: Numbers, Operations, Formulas & Units
Project 1 – Can start after watching video on Topic 16
Exam 1 (Math Unit 1)
Unit 2: Statistical Data Collection
Fractions and Probability
Exam 2 (Math Units 2 & 3)
Unit 4: Exact Linear Relationships
Unit 5: Correlation and Approximate Linear Models
Exam 3 (Math Units 4 & 5)
Unit 6: Tabular and Graphical Displays
Project 2 – Can start during Unit 6
Unit 7: Summarizing Data Numerically
FINAL EXAM