

MAT 133.02 (PSY 144, CIS 203)

Fall 2013, Course Syllabus

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 Posted schedule at <http://bit.ly/sftschedule>
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Online Course Info: www.mymathlab.com; Course ID = **tuckey81015**

Class Sessions: T/R 6:00-7:56 PM, James McDivitt Hall, Room 248

SI Leader: Rob Corwin

Required Materials: TI-83 or 84 calculator (TI-84 *STRONGLY* encouraged), MAT 133 Course Pack (available in the JC Bookstore), MyMathLab Student Access Kit, LARGE 3-ring binder, LARGE eraser, pencils, multi-colored highlighters

Optional Materials: Textbook (*Statistics: Informed Decisions Using Data*, 4th edition; Author: Michael Sullivan, III; Publisher: Prentice Hall). A hard copy is not required, but it is available for rent in the JC Bookstore.

Please note: Access to a computer with Internet is required for this section of Math 133. We will be doing homework, projects, and other activities online, outside of class. School computers can be used to satisfy these requirements. You can also access the text online.

Course Description: Emphasizes basic descriptive statistics, probability theorems, frequency distributions and functions, binomial and normal probability distributions and functions, probability density functions, hypothesis testing, statistical inferences, CHI-square analysis, linear regression and correlation

Prerequisite: A 2.0 in MAT 033, 131 or higher, or course placement by exam. (Note: Math 031 is **NOT** an acceptable prerequisite for Math 133)

Math 133 Course Objectives: Students will be able to:

- Perform a hypothesis test involving means and proportions.
- Create, interpret, and apply graphical displays of data (histograms, bar charts, circle graphs, dot plots, and stem and leaf displays)
- Compute, interpret, and apply descriptive numerical measures (mean, mode, median, range, variance, and standard deviation)
- Compute and apply a linear regression line and Pearson product moment correlation coefficient and rank correlation coefficient.
- Compute, interpret, and apply probabilities involving discrete, binomial, normal, and *t*-distributions.
- Compute and apply confidence intervals for means and proportions.
- Use appropriate technology (such as a graphing calculator) to enhance the understanding of previous objectives.
- Knowledge and awareness of statistics in scientific issues and current events

Math 133 Associate Degree Outcomes: All courses at Jackson Community College address one or more of the institutionally defined Associate Degree Outcomes (ADOs). Math 133 contributes to the following outcomes.

ADO 3: Proficient - Demonstrate computational skills and mathematical reasoning

- Demonstrate an understanding of descriptive statistics (mean, mode, median, quartiles, range, variance, standard deviation, IQR).
- Demonstrate an understanding of probabilities – discrete, binomial, normal, Student’s- T, classical, and empirical.
- Demonstrates an understanding of confidence intervals.
- Demonstrate an understanding of statistical displays (histograms, bar charts, pie charts, boxplots, stem-and-leaf plots)
- Demonstrates an understanding of the language of statistics in real-life contexts – Type I or II errors, confidence intervals, transforming claims into statistical hypotheses.
- Demonstrate an understanding of the Least Squares Linear Regression line and Pearson Product Moment Correlation coefficient.
- Demonstrate an understanding of statistically testing hypotheses.
- Acquires and applies a broad range of statistical skills and concepts as well as technology to facilitate efforts to visualize, interpret, and solve statistical problems.
- Uses graphic calculator and/or computer statistical systems to support mathematical reasoning and problem solving.
- Understands the role of statistics in interpreting the world – bias, misleading graphs, correlation/causation, statistical error, central limit theorem.

ADO 7 – Proficient - Critical Thinking

- Demonstrates an understanding of bias, correlation/causation, evidence supporting arguments.
- Understands multiple factors affecting assumptions and conclusions in hypothesis testing Articulates and defends conclusions in hypothesis testing.
- Uses expanded vocabulary in hypothesis testing.

Course Requirements:

Online Homework:

- These assignments must be done outside of class time on a computer with Internet access at MyMathLab (reachable through <http://www.mymathlab.com>).
- There is typically a homework assignment for each section in the course.
- Homework is due at regular intervals, which will be announced in class and listed online.
- You have an unlimited number of tries to do the homework before you submit it (up until the due date). Therefore, you can score 100% on your homework, provided you start early and keep trying.
- There are videos available on <http://www.youtube.com/user/tuckeyalanaj> to help you navigate completing homework assignments, using the help features, and more.

In-Class Work, Quizzes, etc.: There will be in-class work submitted frequently class (turned in for credit). These may be individual or group assignments, closed or open notes at the instructor’s discretion. There may also be additional quizzes posted on MyMathLab for students to take outside of class. Students that are absent may not make up the missed in-class assignments for any reason.

Projects: There are two mandatory projects in the course. These are done entirely outside of class and will require the use of a computer, the Internet, YouTube, and Microsoft Excel. You can use school computers to complete the projects, if necessary.

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

Exams: Due to the nature of the course, every exam will have questions that relate to previous exams. The final exam is cumulative for the whole course. Exams **may not be made up** except under extreme, well-documented circumstances. Final decisions as to whether a make-up exam will be allowed rest solely with the instructor, so contact them immediately if there is a problem. You will be allowed one page (8.5-by-11, front and back) of notes for each exam of your own creation. All previous notes sheets may be used on the final exam. There will also be instructor-provided tables and sheets on most exams.

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:

90 - 100%	4.0
85 - 89%	3.5
80 - 84%	3.0
75 - 79%	2.5
70 - 75%	2.0
65 - 69%	1.5
60 - 64%	1.0
50 - 59%	0.5
0-49%	0.0

Grading Policy:

MML Homework:	10%
In-Class Work, Quizzes, etc.:	15%
Exam 1 (ch 1-4):	15%
Exam 2 (ch 5-8):	15%
Exam 3 (ch 9-11):	15%
Projects:	10%
Cumulative Final (ch 1-13):	20%

Intermediate Grading: To comply with college policy and federal regulations you will receive three intermediate grades during the semester. The grades assigned are letters with the following meanings:

- **V:** Verifies that you are participating and your work so far has been acceptable
- **H:** Means that you are participating, but your work shows that you may require Help in order to complete the class successfully. If you receive an H grade, you will be contacted by the Center for Student Success (located in 125 Bert Walker Hall) and offered tutoring services.
- **Q:** Means that you have quit participating in the course. If you receive a Q grade, you will automatically be withdrawn from the course. A Q grade is normally assigned if you have not submitted work (class work, exams, participation, etc.) for two weeks and have not contacted your instructor regarding your absences.

Important Dates: Be sure to check out the JC Academic Calendar for Project Success Day, Holidays with no classes, last day to withdraw, etc. at http://www.jccmi.edu/academics/academic_calendar.htm

Absence Policy: Students are expected to attend all class meetings, arriving on time, and staying until the end. We do a variety of in-class activities involving other students and group participation and therefore cannot be made up outside of class for any reason. If absence is unavoidable the **student is responsible** for obtaining the missed lecture notes from another student (or by watching the online YouTube lecture videos). Please remember that office hours are not a replacement for class time.

Incomplete Policy: (Excerpt from JC 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."

Academic Honesty Policy: You are *encouraged* to talk to each other, but all your work must be your own. In other words, "group-work" is a great way to learn material, but anything you submit for a grade must be done by you - reflecting your own thought processes, not that of someone else. If I suspect you of academic dishonesty, I will follow JC's Academic Honesty Policy and take appropriate action up to and including assigning a **failing grade** for the paper, project, report, exam, or the course itself (whichever I deem necessary). The policy can be seen here: <http://www.jccmi.edu/policies/Academics/>

Classroom Behavior Policy:

1. Be Responsible: for your work, for your learning, for your behavior in class, etc.

The online homework and take-home worksheets require responsibility on your part. You will need to stay on top of your schedule and your life to make sure that all coursework is done in a timely fashion.

2. Be Respectful: of other students, of the instructor, of the material, of yourself...

Turn OFF your mobile devices; no chewing tobacco; come on time; stay for the full class session; be prepared to answer questions and work together.

Tentative Course Outline:

Chapters Covered	Sections
Chapter 1	1.1 - 1.3, 1.5, 1.6
Chapter 2	2.1 - 2.4
Chapter 3	3.1 - 3.5
Chapter 4	4.1 - 4.4
Exam 1 (Ch. 1-4)	
Chapter 5	5.1 - 5.3
Chapter 6	6.1 - 6.2
Chapter 7	7.1 - 7.3
Chapter 8	8.1 - 8.2
Exam 2 (Ch. 5-8)	
Chapter 9	9.1 - 9.4
Chapter 10	10.1 - 10.4
Chapter 11	11.1 - 11.3, 11.5
Exam 3 (Ch. 9-11)	
Chapter 12	12.1 - 12.2
Chapter 13	13.1
Final Exam (Ch. 1-13)	

Please Note: This outline is **tentative** and subject to change due to a variety of in-class factors. To know exactly what day material was covered, you must attend class or contact others who did.

This class will move VERY fast, especially before the first exam (during which you will cover Chapters 1 and 2 largely on your own). Expect **SUBSTANTIAL** amounts of homework and plan on no less than 3 hours of outside-class time *for every class session*.

The single most frequent piece of advice given by successful students to future students in this class is: ***"Don't fall behind -- do homework every day."***