

Math 133.81 Course Syllabus – Winter 2018

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MyStatLab Website:	www.mystatlab.com
MyStatLab Course ID:	fogarty77247
Class Time/Location:	TTh 4:00-5:50 PM LeTarte Center Room 14
Office Hours:	Before and After Class and by Appointment

Required Materials: Coursepack, MyStatLab (a.k.a. MyMathLab) Student Access, LARGE 3-ring binder, LARGE eraser, pencils, highlighters, TI-84 Calculator **required** (Note: TI-83's cannot run the newest operating system, which puts students using them at a disadvantage)

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

Optional Textbook: *Statistics: Informed Decisions Using Data 4th edition*, Author: Michael Sullivan, III, Publisher, 5th edition: Prentice Hall – **Please note:** This textbook is available online within MyStatLab.

Course Description: This course is an introduction to experimental design, data representation, basic descriptive statistics, probability theorems, frequency distributions and functions, binomial and normal probability distributions and functions, probability density functions, hypothesis testing, statistical inference, chi-square analysis, linear regression, correlation and application of the above in making informed, data-driven decisions in real-world contexts. Both graphing calculators and computer-based statistical software (Microsoft® Excel) will be used. If the prerequisite is more than two years old the recommendation is the course placement assessment be taken or the prerequisite be retaken to ensure the success of the student.

Prerequisite: A 2.0 in MAT 033, 131 or higher, or course placement by exam. (Note: Math 039 is NOT an acceptable prerequisite for Math 133)

Math 133 Core 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.
- 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 General Education Outcomes: GEO 3 – Demonstrate Computational Skills and Mathematical Reasoning

Course 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 a class results in being unable to participate in the next level of courses in a discipline which requires this course as a pre-requisite.

Registering for the next course sequence without passing the pre-requisite course may result in you being dropped from that class.

<u>Grading Scale:</u>		<u>Grading Policy:</u>
90 -100%	4.0	
85 - 89%	3.5	Online MML Homework: 20%
80 - 84%	3.0	Exam 1 (ch 1-4): 15%
75 - 79%	2.5	Exam 2 (ch 5-7): 15%
70 - 74%	2.0	Exam 3 (ch 8-10): 15%
65 - 69%	1.5	Projects: 10%
60 - 64%	1.0	Cumulative Final (ch 1-10): 25%
50 - 59%	0.5	
0-49%	0.0	

Online Homework:

- There is a homework assignment for each section in the course, which must be completed outside of class time on a computer with internet access at MyStatLab (<http://www.mystatlab.com>).
- Homework deadlines are posted in the Homework section of MyMathLab. Homework is due the day of the exam that it covers.
- You have an unlimited number of attempts for each homework exercise until the due date. Thus, earning 100% on your homework is possible, provided you are persistent.
- There may also be video lectures assigned and the notes collected in class for some sections of the course.
- There are videos available on <http://www.youtube.com/user/tuckeyalanaj> to help you with completing homework assignments, using the help features, and more.

In-Class Work.: There will be frequent worksheet completed in class or at home. These are not for credit and serve as extra practice for the exams.

Projects: There are two mandatory projects in the course that are designed to improve students' statistical and technological skills and connect course concepts with applications. These are done entirely outside of class and will require the use of a computer, the internet, YouTube, and Excel. You can use school computers to complete the project, if necessary.

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 with any problem. **You will be allowed the use of one page (8.5" x 11", front and back) of notes of your own creation (excluding copies of pages from the course notes) for each exam.** All previous note sheets may be used on the final exam. There will also be instructor-given tables and info sheets on certain exams. The Final Exam takes place during the last week of the course and CANNOT be taken early.

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

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.

Important Dates: Be sure to check out the JC Academic Calendar for important dates such as holidays with no classes, graduation, etc. at <https://www.jccmi.edu/academics/academic-calendar/>

Incompletes Policy: A student may request an incomplete from the instructor. The College's incomplete policy will be followed if an "I" is requested. 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.

Note: Requesting an "Incomplete" grade is not a valid strategy for avoiding failure

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 Federer C – Potter Center) 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 (classwork, exams, participation, etc.) for two weeks and have not contacted your instructor regarding your absences.

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/Policies/1004.pdf>

Classroom Behavior Policy: "We know what a person thinks not when he tells us what he thinks, but by his actions." - Issac B. Singer

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

The online homework and take-home quizzes in particular are going to require great levels 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 cell phones, no chewing tobacco, come on time, stay the full time, be prepared to answer questions and work together.

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 131. You can get help with take-home work, MyStatLab homework, and more. The Center is located in Bert Walker Hall. Their phone number is 517-796-8415

SI Leaders: Some sections of 133 may have Supplemental Instruction Leaders who will have sessions that are open to all 133 students. For more information, contact the Center for Student Success.

YouTube Videos: Lead Faculty Alana Tuckey has created hundreds of videos showing for this course including lectures, Excel, the calculator, and more. Go to: <http://www.youtube.com/user/tuckeyalanaj> and check out any 133 playlists.

MyStatLab: There are videos, extra problems, sample exams, lecture notes, PowerPoint lectures and more available in MyStatLab. It's a great resource!

Each Other: Get a regular study group. Write down names and numbers of your peers and call on each other when needed!

Name:	Contact Info:	Availability:

Math 133-81 Schedule for Winter 2018

Day	Date	Material Covered	Topics
1	1/16	1.1, 3.1	Introduction to Statistics; Start Measures of Center
2	1/18	1.3*, 1.4*, 3.2	Finish Measures of Center; Simple Random Sampling; Start Measures of Spread
3	1/23	3.3-3.4	Weighted Mean, Measures of Position
4	1/25	3.4-3.5	Measures of Position; Boxplots
5	1/30	1.2*, 4.1	Observational Study vs Experiment; Correlation
6	2/1	4.2-4.3	Linear Regression; Residual Plots Project 1 Assigned
7	2/6	Review for Exam 1	Review for Exam 1
8	2/8	Exam 1 (Ch 1-4)	Exam 1
9	2/13	5.1-5.2	Basics of Probability; Addition Rule
10	2/15	5.2-5.3	Addition Rule; Multiplication Rule
11	2/20	4.4*, 5.4, 6.1	Conditional Probability; Discrete Probability Distributions Project 1 Due
12	2/22	6.2, 7.1	Binomial Distribution; Normal Distribution
13	2/27	7.1 cont'd, 7.2, 7.3*	Binomial Distribution; Normal Distribution
14	3/1	7.2 cont'd, 7.3*	Normal Distributions; Normal Probability Plot
15	3/6	Exam 2 Review	Review for Exam 2
16	3/8	Exam 2	Exam 2 (Chapters 4.4, 5-7)
17	3/20	1.5* 8.1-8.2	Bias in Sampling; Distribution of Sample Means and Sample Proportions
18	3/22	9.1	Confidence Intervals for Proportions
19	3/27	9.2	Confidence Intervals for Means
20	3/29	9.4, 9.5*	More with Confidence Intervals; Confidence Interval Review
21	4/3	10.1	Confidence Intervals for Standard Deviation; More with Confidence Intervals Project 2 Assigned
22	4/5	10.2	Basics of Hypothesis Testing
23	4/10	10.3, 10.5*	Hypothesis Testing with Proportions and Means
24	4/12	Exam 3 Review	Review for Exam 3

25	4/17	Exam 3	Exam 3 (Chapters 8-10)
26	4/19	1.6*, 11.1-11.2	Hypothesis Testing for Differences of Proportions and Means (Dependent Samples)
27	4/24	11.2-11.3, 11.5*	Hypothesis testing for Difference of Means (Independent Samples), Hypothesis testing for Difference of Means: Dependent Samples
28	4/26	12.1-12.2	Hypothesis Testing for Goodness of Fit and Independence Project 2 Due
29	5/1	Review for Final Exam	Final Exam Review
30	5/3	Final Exam	Final Exam

Sections with an asterisk (*) will not normally be covered in class since we do not have the time. The videos for these sections will be placed in the MyMathLab homework and treated as assignments. Make sure you use the videos to fill out the associated sections in the course pack.

Affected sections: 1.2, 1.3, 1.4, 1.5, 1.6, 4.4, 7.3, 9.5, 10.5, 11.5 and all of chapter 2.