

Math 133 Syllabus

Introduction to Probability and Statistics

(# Credit Hours: 4

Class Hours/Week: 4)

Class Time: MW 8:30 am – 10:20 am
 MW 1:00 pm – 2:50 pm

Building /Class Room:

Instructor: Mona Baarson

Office: JM 246

Phone: 796 – 8579

E-mail: baarsonmonag@jccmi.edu

Office Hours:

My office hours and class schedule for the semester are as follows.
If these times need to change, I will give you a new schedule.

**Office Hours / Class Schedule Winter 2019
for Mona Baarson**

	Monday	Tuesday	Wednesday	Thursday	Friday
8:00					
8:30	Math 133.01	Math 154.01	Math 133.01	Math 154.01	CLASS PREPARATION AND DEPARTMENT MEETINGS ↓ ↓ ↓ ↓ ↓ ↓ ↓
9:00	JM 247	JM 251	JM 247	JM 251	
9:30	8:30a–10:20a	8:30a–10:48a	8:30a–10:20a	8:30a–10:48a	
10:00	↓	↓	↓	↓	
10:30	OFFICE	↓	OFFICE	↓	
11:00	10:30a–11:30a	OFFICE	10:30a–11:30a	OFFICE	
11:30	TRAVEL	JM 246	TRAVEL	JM 246	
12:00		11:00a–12:30p		11:00a–12:30p	
12:30	OFFICE N/C		OFFICE N/C		
1:00	Math 133.01		Math 133.01		
1:30	North Campus	Math 141.01	North Campus	Math 141.01	
2:00	1:00p–2:50p	1:30p–3:48p	1:00p–2:50p	1:30p–3:48p	
2:30	↓	↓	↓	↓	
3:00	OFFICE N/C	↓	OFFICE N/C	↓	
3:30		↓		↓	
4:00					
4:30					
5:00					
5:30					
6:00					
6:30					
7:00					
7:30					
8:00					
8:30					

- Other office hour times are available by appointment.
- I am also available by email, baarsonmonag@jccmi.edu, to help you with any questions or concerns you may have about this class.
- I may also be reached by telephone at 517-796-8579.

Purpose and Learning Objectives

**"The function of education is to teach the student to think intensively and critically.
Intelligence plus character.... that is the goal of education."**

Dr. Martin Luther King

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(s): 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)

Course Goals: The purpose of this course is to develop an understanding of functions, advanced concepts of algebra and trigonometry. We will also learn to use problem solving techniques to obtain a sense of how and why algebra is used, and to be able to relate these problems and use the learned problem solving techniques to real life applications. We will integrate the use of technology throughout the course by making use of the Graphing Calculator (TI-84 Plus). Great emphasis will be placed on understanding of terms, concepts, principles and theories rather than cramming and memorization.

Performance Objectives:

I. Core Course Objectives

Students completing Math 133-Introduction to Probability and Statistics 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

II. General Education Outcomes (GEO) & Essential Competencies (EC)

General education outcomes and essential competencies assesses the student's attainment of skills obtained during their completion of a degree. These skills are defined consistent with the college mission and dispersed across a multitude of courses in the student's program. Courses fulfilling one of more of these outcomes assess for achievement once/year.

Because the vision of Jackson College includes a variety of educational, cultural and economic goals, the general education requirements involve both traditional intellectual pursuits and practical skill development. As the general education requirements are designed to ensure breadth and depth of knowledge, they are met through carefully designed programs of study. Programs of study help students meet these goals by addressing each of the skill areas identified in the **General Education Outcomes**. These are skills which the Jackson College Board of Trustees has determined students should develop or enhance while enrolled in the college.

GEO	Description
1	Write clearly, concisely and intelligibly
2	Speak clearly, concisely and intelligibly
3	Demonstrate computational skills and mathematical reasoning
4	Demonstrate scientific reasoning
5	Understand human behavior and social systems and the principles which govern them
6	Understand aesthetic experience and artistic creativity
7	Understand and respect the diversity and interdependence of the world's peoples and cultures

Essential Competencies (EC)

In addition to the GEOs, the college is committed to helping students develop three Essential Competencies. These skills are embedded in each program of study, and are shaped by the program focus and the pathway within which the program is hosted.

EC	Description
1	Think critically and act responsibly
2	Work productively with others, recognizing individual contributions to group success
3	Exhibit technological literacy

The course goals and objectives incorporate specific General Education Outcomes (GEOs) established by the JC Board of Trustees, administration, and faculty. These goals are in concert with four-year colleges and universities and reflect input from the professional communities we serve. GEOs guarantee students achieve goals necessary for graduation credit, transferability, and professional skills needed in many certification programs. The GEOs and course objective addressed in this class is **GEO 3** – Demonstrate Computational Skills and Mathematical Reasoning.

MATH 133 addresses GEO 3: Demonstrate computational skills and mathematical reasoning

Instructional Techniques and Procedures

This course usually consists of mostly instruction, group work and classroom demonstrations using the graphing calculator (TI84 Plus).

Course Information and Requirements

Attendance and Withdrawal Policy

"A person who neglects his education neglects his most valuable and vulnerable resource. He neglects his future."

"Education is the best provision for old age."
Aristotle

1. **Office Hours:** I will give you a handout with my posted office hours.
I will always be available to you during these times.

I strongly encourage you to come to me first to get help outside of class. Please do not ever get behind because of lack of understanding. I always want to do my best to help you understand this thing called math. If your available time and mine do not match, then there are other alternatives for help outside of class.

- You may also send me an email with your question or concern. I will always try to answer your email in a timely manner.

My email address is: baarsonmonag@jccmi.edu

- You may also call me at my office number during office hours and I can help you over the phone.

Always feel free to leave messages on my phone mail or contact me through email with any questions or concerns you may have about the course.

My office number is 517-796-8579.

2. **Tutoring:**

- There are also personal tutors available through the Center for Student Success. If you feel that you need a personal tutor, please come see me and I will put you in touch with the person in charge of this service.

3. **Study Groups:** I strongly encourage you to make a friend or friends in class that you can get together with outside of class. One of the best ways to study and to learn is by helping one another. Like "they" say, "Two heads are better than one."

From the three items above, I hope it is obvious that your success is of utmost importance to all of us here. There is never a need to feel lost because of lack of understanding. There are so many ways for you to obtain math tutoring outside of the regular classroom. There is always some type of math help available. As long as you are being responsible for your learning by attending class, doing the assigned homework and other classroom activities, asking questions in class, and seeking help outside of class from the instructor, the tutoring services and your fellow classmates, success will be yours!!!

4. **You are responsible for the homework assignments.** The way they are to be completed and turned in is outlined in the pages of the syllabus. Do the homework assignments before attending lectures. The lecture will be used to clarify and re-emphasize previous material and to introduce new material. If you fail to come to class, you will not only miss the lectures, but will also miss the quizzes and the homework review. You will consequently receive a poor grade, not because you cannot do math, but because you failed to show up in class. Remember, there is a strong positive correlation between attendance and performance. It has also been determined that for each hour spent in class, one should spend **at least** two hours studying and reviewing outside of class. Be sure to allow time to do your coursework, to ensure success.
5. **Calculators:** **Graphing Calculators are required for MAT 031, 033, 035, 131, 133, 139, 141, 151, 154, 251 and 254. The TI-84 calculator is the preferred calculator for MAT 039, 033, 035, 131, 133, 139, 141, and 151. The TI-84, TI-89 or TI-NSpire CAS calculator may be used for MAT 154, 251, and 254.**
6. **Attendance is required and will be taken in some fashion daily (either by roll call or quiz).** Attendance will be included in the quiz grade. Quizzes count 15% of your grade. I will drop 3 quizzes at the end of the semester. If you do not plan to attend lectures regularly, you are advised to withdraw.
7. You bear the sole responsibility for your withdrawal from this course just as you did when you registered for the course. **The last day to withdraw is _____.**
8. **Classroom Behavior:** As stated in the Student Handbook, "misconduct for which students or visitors are subject to discipline are as follows:
 - 1) **Dishonesty, such as cheating, plagiarism,** or knowingly furnishing false information to the College.
 - 2) **Forgery, alteration, or misuse** of College documents, records or identification.
 - 3) **Obstruction or disruption of teaching, lecturing,** research, administration, disciplinary procedures, or other authorized activities on College premises..."

I would like to specifically address the highlighted words in this section:

If I ever have any suspicions of dishonesty, the students involved will receive no credit for that particular assignment.

I will not tolerate the classroom teaching/learning process to be disrupted. When I am teaching, I expect my students to be actively listening, in order to answer questions I may ask of them. **Talking to one another while I am teaching is not permitted.** If you have a question while I am lecturing, ask that question of me, not your friend beside you. If you feel the need to come to class and visit with your friends, **I will ask you to leave class and not return until you've met with me to discuss a plan for improved classroom behavior.** If your behavior does not improve after this, then I will visit with the dean of students or the dean of instruction to determine appropriate measures to be taken at that time.

It is extremely important for each student to be in class on time. Not only is the class disrupted by latecomers, the late student misses out on enough time to take quizzes, misses being counted for attendance, and any instructions given at the beginning of class.

It is also extremely important that students do not get up and leave in the middle of class. (It is very disruptive, to my teaching and others learning, for students to get up and leave or wander in and out of class at any given time.)

I will not tolerate the learning process of any student to be interrupted by lack of respect and consideration from a small few.

Electronic Devices and Cell Phone Policy

The use of cell phones, walkie-talkies, beepers, pagers, any communication device is not permitted in the classroom. If you must bring them to class, I ask that you turn the sounds that they make completely and totally off!!! These devices are not to disrupt class at any time for any reason. If the situation is so extreme that it warrants disrupting the entire class with your communication, then I ask that rather than disrupt class in that manner, perhaps you need to stay home and take care of your business or listen to your CD's or watch your DVDs or play your computer games. This perhaps sounds exceptionally rude and for that I apologize. However, this has become a severe problem to the learning process and we will no longer condone the behavior of people who feel the need to be rude to the entire class. If one of these devices ever disrupts my class, I will ask you to leave class for that session and I will report the disturbance and your dismissal from class to the Dean of Students. If the behavior happens more than once, you will be dismissed from class and will not be able to return until you have made a visit to the Dean of Students, he/she notifies me that you will be returning to class, and you and I meet to discuss a plan for improved classroom behavior.

Please let me be perfectly clear....

I do not want you sitting in class with your headphones on, watching movies, texting, playing games, etc.....

There is to be absolutely no texting at all during class. I will ask that you put your texting device on my desk until the end of class, if I catch you doing this during class time.

If this behavior is necessary for you to be able to function in class, then you need to find another class to sign up for.

I-Pods(or their clones), radios, computers, smart watches, etc...

The use of I-Pods(or their clones), radios, computers, smart watches etc... is also not permitted to be used during class at any time.

If listening to your I-pod is more important than what I have to say and to teach that day, then perhaps you should stay home and listen to your I-pod.

Laptops/Computers

I also do not want you to have your laptops out working on them while I am teaching. (Not even if you are doing your MyMathLab homework assignments.) Class time is not the time to be doing those assignments. The laptop is a useful tool to have available, however it is a distraction to you and your neighbors in the classroom. I do not want to have to become a laptop monitor and worry about what you are doing with the laptop that is not math related (or even if it is). When the class is taught in a room equipped with laptops, I will thoroughly enjoy that. However, until that happens, please leave your laptops at home or in their bags.

All of these items become a huge distraction to everyone's learning process. All of these things that are "entertainment devices" have a wonderful use in the right time and place, just not in my classroom.

It takes all of us working together in a positive fashion to get the most out of our class. I am looking forward to sharing with you, a very positive and rewarding semester of mathematics. Not only do I look forward to your success, but I also hope you enjoy the learning process along the way.

Please Note:

1. **Cell Phone Policy** – Cell phones are NOT allowed in our classroom, without specific permission from me and only under special circumstances. The 1st time the policy is broken by one student the ENTIRE class will be given one warning. After that warning if/when a student is found using or looking at a cell phone during class time, they will be asked to leave the class for the remaining class period.
2. **On-time Policy** - Class is to be treated like a job. To be respectful to your peers, your instructor and yourself, you are expected to be on time for class. There are always those situations that arise that we cannot predict. i.e. a dead car battery, inclement weather, a sick child, personal illness, or a death in the family. Please contact your instructor, Mrs. Baarson via e-mail baarsonmonag@iccm.edu or by office phone at 517-796-8579 as soon as possible. I will worry about you and your safety. However, if you are late to class and assignments have been completed and turned in prior to your arrival, you will NOT be given the opportunity to earn this credit.
3. **Headphones and Ear Buds Policy** – Headphones and ear buds are NOT allowed in our classroom. The use of these items hinders the learning process and keeps you from being able to participate effectively in classroom activities. There will be no circumstance in which these are permissible.
4. **Late Work Policy** – There is a “no late work accepted” policy for this class. (This is a department rule as well.)

If you are not in class to pick up the assignments as they are given, you must come to see me during office hours to pick up the missing assignments. You must then have those assignments completed by the due date in order to receive credit for the missed class assignments. This policy is for all assignments given throughout the semester.

If an assignment is completed and turned in during class time, then that particular assignment may not be turned in at a later time. This is true for all Quizzes given and turned in during class, Classwork turned in during class, and all Exams.

Other General Information

***Attendance:**

I do not specifically grade students based on attendance. The quizzes I give in class are used for attendance purposes (see explanation in grading procedures). However, my experience is that good attendance generally correlates highly with success on homework and tests. A student who misses class is responsible for any material presented or assignments given at the missed class. I suggest that students exchange phone numbers with someone in the class with whom they can check in the event of a missed class.

***Academic Honesty:**

(Excerpt from JCC policy; see instructor for a copy of the complete policy.) Academic Honesty is expected of all students. It is the ethical behavior that includes producing their own work and not representing others' work as their own, either by plagiarism, by cheating or by helping others to do so. Faculty members who suspect a student of academic dishonesty may penalize the student by...assigning a failing grade for the paper, project, report, exam or the course itself.

***Audits:**

Must be registered during the first week of class. You will not receive a grade or credit for the course.

***Withdraw** deadline for this semester is _____.

If you do not wish to complete the class and receive a grade, because you are not happy with your grade or for any other reason, you must withdraw by this date. The instructor may withdraw any student who does not attend class for two consecutive weeks. The instructor may withdraw any student who does not complete assignments and/or tests in a timely manner.

However, **do not assume that I will withdraw you.**

***Incompletes** will be given only in accordance with JCC policy. (Excerpt from JCC policy; see instructor for a copy of the complete 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.

Please Note: *I will not give an incomplete simply to avoid a failing grade.*

***General College Policies:** You should read the policies and procedures of the college as specified in the "Student Handbook" .

***Extra Credit:** The mathematics department strongly recommends that extra credit not be offered in mathematics courses. In order to foster a collegiate environment, maintain the integrity of student grades, and provide for proper student placement and advancement through sequenced courses, the department believes this to be in the best interests of both students and faculty. Extra credit is understood to include bonus points on a test or assignment, separate extra credit assignments, and other forms of providing opportunities for more than 100% credit.

Please Note: *I do not give an extra credit on any assignments.*

*** Instructional Philosophy:** Education is a self-initiated, active, goal-directed process, leading to a change and/or expansion of the students understanding of and ability to use the subject material. The student is expected to be accountable for the learning process. The instructor should be viewed as a facilitator and resource person to assist in the process.

Math 133-Introduction to Probability and Statistics

Course Materials

The following are the **required** materials for Math 133 – Introduction to Probability and Statistics

- **MyMathLab**

Please Note: We will be using the digital format of this book and the homework system found within MyMathLab

Text Book Zero –

The textbook is available in a digital format and may be purchased in the bookstore. or online at <http://www.pearsonmylabandmastering.com/northamerica/mymathlab/>

- **Graphing Calculator**

- A graphing calculator will be used throughout the course.
- The TI-84plus is recommended.
- This is the calculators that are used in the textbook examples and illustrations, and also by the instructor.
- Thus, it would be to your advantage to have the same model.
- I will be able to assist people in the usage of their calculators if they have one of the Texas Instruments graphing calculators.
- If you have any other calculator, you will be responsible for learning the calculator and troubleshooting any problems.

Please note: If you use the TI-Nspire, it may not be the CAS version.

The following are useful but **not required** materials for Math 133 – Introduction to Probability and Statistics

- **Hard Cover Textbook**

Please Note:

If you would like a hardcopy of the textbook to reference, you may use the following ISBNs:

Text: **Statistics: Informed Decisions Using Data, 5th Edition**

Author: **Michael Sullivan, III**

Publisher: **Pearson**

ISBN: **13: 978-0-13-413353-9(Student Copy)**

or 10: 0-13-413353-6 (Student Copy)

Please Note: Students may also use the 4th edition of this textbook as the hardcopy for reference.

Getting Help With This Class

Get Help from the Instructor

There are several ways for you to get help from me:

- You can e-mail me a question any time. I try to return e-mail within 48 hours, except for weekends; if you e-mail after 3 pm on a Friday, you may not hear back from me until the following Monday.

When you e-mail, **put MAT133 in the subject line followed by your name.**

So, the e-mail will come to me as: **Subject: MAT133 Your Name.**

If you need an immediate answer put: **Subject: MAT133 Your Name URGENT**

My e-mail address is: BaarsonMonaG@jccmi.edu

- You can call my office at 796-8579. If you call during my scheduled **Office Hours** you will most likely reach me directly. Otherwise, you may leave a message. I try to return phone calls within 48 hours, with the exception of weekends; if you call after 3 pm on a Thursday, you may not hear back from me until the following Monday. (It would be best to e-mail me before 3pm on a Friday if you need to talk with me before the following Monday.)
- You can come to main campus to get face-to-face help during my scheduled office hours.
My office hours are located outside my office door and on the office hours handout I gave you at the beginning of the semester.

Calculator Help

- You can get **Online Help** with most major brands and models of graphing calculator.
- If you are using the TI-84 you are welcome to come see me during office hours to get help.
- We will also be learning the calculator in class as we progress through the course material.

Tutoring

- Tutors are available on a walk-in basis on campus. You can call the **Center for Student Success** located in Bert Walker Hall, 2111 Emmons Road Jackson, MI 49201 for current hours and tutor availability. Phone: 517.796.8415

Grading Procedures

Please Note:

There is a “no late work accepted” policy for this class.

If you are not in class to pick up the assignments as they are given, you must come to see me during office hours to pick up the missing assignments. You must then have those assignments completed by the due date in order to receive credit for the missed class assignments. This policy is for all assignments given throughout the semester.

If an assignment is completed and turned in during class time, then that particular assignment may not be turned in at a later time. This is true for all Quizzes given and turned in during class, Classwork turned in during class, and all Exams.

CLASS WORK/ QUIZZES/ ATTENDANCE:

- Classwork/Quizzes will be given most class periods.
- Classwork/Quizzes will be given at different times during class. (sometimes at the beginning, in the middle, or at the end)
- Classwork/Quizzes will also be used for attendance purposes.
- Classwork/Quizzes are graded using two main formats:
 - Classwork/Quizzes will be graded during the class period, in which the students are to correct their work and will be given the “corrected” grade
 - Classwork/Quizzes will be taken home by me to grade and will be assigned the earned grade

Classwork/Quizzes will count 10% of the final grade.

Classwork/Quizzes MAY NOT MADE UP FOR ANY REASON.

(I will drop at least three quizzes at the end of the semester.)

HOMWORK:

Homework Folders:

- Homework will be assigned for each class period in MyMathLab.

To receive credit for homework:

- Students will be complete the homework found in MML by doing each problem on paper and putting it in the Homework Folder.
- The homework folder will be handed in at the beginning of each testing period.
- The homework needs to be put in a three-prong folder.
- **(I will not accept homework in a spiral notebook, three-ring notebook, etc..... or homework done in ink---homework is to be done in pencil only)**
- Homework must be organized in the folder by labeling each assignment with the text section number, assignment page number, and the assigned problems.
- I will work the homework problems that the students have questions about at the beginning of each class.
- Also, students may use the "ASK MY INSTRUCTOR" button in MML to let me know which questions they are having trouble with.
- Due to the time limitation of each class period, there may be times when I must ask that you come see me during office hours to have all of your questions answered.

Please Note: Students are expected to put the answers they found by working the problems on paper into MML.

Note: *Due to the limitation of time, I will use the time allowed in class for answering questions about the problems out of the text that were assigned as homework problems. If you have questions about other problems in the text, please ask these during my office hours.*

Homework folders will be graded in the following way:

- **I will collect the homework folder at the beginning of each testing period.**
- The folder should include all of the completed assignments, in order, labeled with the assignment, and done in pencil.
- **I grade the homework folder on effort and completeness.**
- I expect all problems to be copied onto the paper and all of the work to be shown.
- I give zero credit for answers only or work copied from solutions manuals.

Please Note: If you chose to not turn in a complete homework folder and only do your homework in MML, then your homework grade will be what the MML score says it is.

******* Homework will count 10% of the final grade.**

EXAMS:

Exams:

- There will be three to four exams that cover the topics of the text.
- Any exam may be taken early if you notify me in advance.
- Any missed exam will count as zero.
- **Most of the unit exams will be taken in the testing lab located in BW 121.**
- **The Final Exam will be taken in the classroom.**

*******EXAMS AS A GENERAL RULE MAY NOT BE TAKEN LATE FOR ANY REASON!!!!!!!!!!**

- Exams may not be missed and then made up in the testing lab.

I realize that situations sometimes occur that are beyond our control. These times are generally infrequent and not usually on test days. These times may happen once a semester to only one or two people (and usually not to the same person). Therefore, in case of an extreme situation, if you must miss on the day of exam, the following procedure must be followed in order to be able to make up the exam:

1. I must be notified on the day of the exam, before class begins, that you will be missing the exam.
2. The missed exam must be taken before I return the exams to the class.

(Since you know the dates of the exams for the entire semester, it is expected that all appointments and activities you need to attend should be made at times other than test day.)

***** **Exams will count 60 % of the final grade.**

PROJECTS / MISCELLANEOUS IN/OUT OF CLASS ASSIGNMENTS/GEO Requirement:

There will be two projects given throughout the semester that will be done as an in-class assignment or perhaps an out of class assignment. These assignments will pertain to material that we have covered in the past or current material. These assignments will be due on the date specified when the assignments are given and will not be accepted late.

***** **Projects will count 5% of the final grade.**

FINAL EXAM:

FINAL EXAM: **The Final Exam will be taken in the classroom.**

A comprehensive final exam will be given. The final may be taken early, but cannot, under any circumstances, taken late.

******* The final exam will count 15% of the final grade.**

FINAL GRADE:

FINAL GRADE: The final grade is calculated by adding:
(10% of the quiz average) + (10% of the homework average) +
(5% of project average) + (60% of the exam average) +
(15% of the final exam score).

GRADES WILL BE BASED APPROXIMATELY ON THE FOLLOWING SCALE:

<u>Weighted Average</u>	<u>Course Grade</u>
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
50 - 59	0.5
0 - 49	0.0