



**Emerging Information Technology
52:623:343 Sections 90 & 92
Asynchronous Online Course
Spring 2025**

Professor: **Dr. Emmanuel Peters**

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Zoom Office Hours: Tuesday 7-8 pm, Thursday 4-5:30 pm and by appointment

In the modern economy, no business manager can perform well without a good understanding of information technology and its role in supporting business goals and transforming organizations. However, information technology is often introduced into organizations without proper managerial support. In this course we will discuss information technologies – **Machine Learning, Deep Learning, Generative AI, and Blockchains**. Focus will be on understanding business use cases and then working with these technologies. We will discuss practical examples and application in business settings, without in-depth treatment of theory or programming. Elementary statistical knowledge, that any manager should have, will be reviewed and used in the course.

COURSE/LEARNING OBJECTIVES

With the successful completion of this course, students will be empowered to:

- Identify emerging information technologies.
- Determine which technologies are worth investing and why.
- Learn how to use these technologies for robust decision making.
- Explain how an emerging technology works and how a business can take advantage of it.

PROGRAM LEARNING GOALS

- Critical Thinking and Analytical Decision Making
- Technology Fluency /IT Literacy

INSTRUCTIONAL MATERIALS

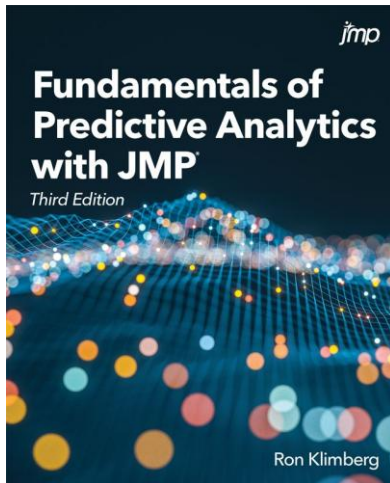
Required Resources

Software: JMP

Available for free to Rutgers students. First week's lecture will provide the details. (You will need to download and install on your laptops.)

Required Textbook:

Fundamentals of Predictive Analytics with JMP, 3rd Edition, Ron Klimberg (RK)



You can purchase the e-book on RedShelf [here](#) or the Kindle or hard copy on Amazon [here](#). Students can use the code ACABPD on RedShelf for 20% off. This discount offer is only available on RedShelf.

ADDITIONAL MATERIALS

- Use of Flash Drive/Memory stick, or get free space at Rutgers OneDrive drive: <https://www.google.com/intl/en/drive/>

OTHER

- Narrated lectures, PowerPoint slides, readings, and other posted material is available on the class Canvas site.
- This course will use various periodicals and websites (Wall Street Journal, Financial Times, Kaggle, etc) as a supplement.

HOW TO SUCCEED IN THIS COURSE

The material presented in class provides the essential backbone of the course. You are expected to:

- Read all text material assigned for each class
- Use PowerPoints as a guide for key concepts
- Follow instructions in all assignments
- Start assignments early and submit them on time
- Consult/meet with the professor immediately when you need help.

CANVAS

- Posted will be the syllabus, resources (articles and examples), Power point slides, announcements, guides, etc. To access this system, go to <https://rutgers.instructure.com> or canvas.rutgers.edu, log in, and click on the course tab.

PROFESSOR COMMUNICATION

- All communications to students will be done using the Rutgers email address provided to you. Please forward your Rutgers email to your personal email if necessary.
- You can either email me at **ep740@camden.rutgers.edu** or **via the Canvas tool**.
- Note that during the week, from Monday until Friday, I will try reply to all e-mails within 24 -48 hours. Please do not expect immediate response. (If you do not hear from me within 48 hours, please re-send your email as I may have overlooked or accidentally deleted your e-mail.)
- Although, I check my e-mails a few times daily, I may not be able to completely answer all e-mails immediately upon receiving them.
- When communicating to me by email, please ALWAYS identify yourself and the course!
- **Not checking your Rutgers email or Canvas site is not an excuse for missing any communications.**

ASSESSMENTS:

Homework: All homework assignments need to be submitted on time. Late assignments will not receive any credit. If you need help with any assignments, please email me or visit my online (Zoom) office hours.

Quizzes: These will be provided via Canvas. Students are reminded to adhere to the university's academic integrity policy. Any violations to academic integrity policy may result in receiving a failure for the course. No makeup quizzes will be scheduled without prior notification and a physician's excuse.

Exams: The exams will be provided via Canvas. Students are reminded to adhere to the university's academic integrity policy. Any violations to academic integrity policy may result in receiving a failure for the course. No makeup exams will be scheduled without prior notification and a physician's excuse.

Discussion Posts: There will be specific discussion board activities in this course. Discussions may involve any combination of prepared materials, journal articles, textbook readings, mini cases, problems, videos, or other resources. All postings including responses are to be substantive and further the discussion of the topic of interest. Postings on the discussion board must reflect student's reading and comprehension of the assigned readings and/or related discussion activity. Discussion postings must reflect the ability to synthesize concepts presented through writing at a college level. The minimum length of a post is 100 words not including references listed.

Class Participation: It is expected that you will visit Canvas homepage regularly every week.

- Lack of participation will be reflected in the final grade.
- All assignments must be handed in on time; late work will receive no credit.
- If you find that you are having trouble completing course work or need further explanation of class topics, please schedule an appointment with me immediately.

- If you need this class for graduation, you should be sure that your performance is up to standard throughout the course. It is too late to wait until the last week of classes to ask for help.
- I'm available to meet throughout the entire semester if you need help.
- "Incompletes" will only be given through prior consultation, under extreme circumstances.

GRADING

The assignment of final grades, the course requirements will be weighted approximately as follows:

Homework (weekly)	20%
Quizzes (4 to 5).....	25%
Exams (3)	45%
Discussion Posts (3 to 5)...	10%

GRADING SCALE

Grades represent the level or quality of the student's performance in a course and are reported by instructors to the registrar at the end of the semester by the following symbols:

Grade	Definition	Numerical Equivalent	Score Equivalent
A	Outstanding	4.0	90-100%
B+		3.5	85-89%
B		3.0	80-84%
C+		2.5	75-79%
C	Satisfactory	2.0	70-74%
D		1.0	60-69%
F	Failing	0.0	Below 60%

DIVERSITY STATEMENT

This class strives to be an inclusive community, learning from the many perspectives that come from having differing backgrounds and beliefs. As a community, we aim to be respectful to all. We reject all forms of prejudice and discrimination, including but not limited to those based on age, color, disability, gender, gender identity, gender expression, national origin, political affiliation, race, religion, sexual orientation, and veteran status. Faculty and students are expected to commit to creating an environment that facilitates inquiry and self-expression, while also demonstrating diligence in understanding how others' viewpoints may be different from their own.

Our goal as a learning community is to create a safe environment that fosters open and honest dialogue. We are all expected to contribute to creating a respectful, welcoming, and inclusive environment. To this end, classroom discussions should always be conducted in a way that shows honor, respect, and dignity to all members of the class. Moreover, disagreements should be pursued without personal attack and aggression, and instead, should be handled with grace and care. This will allow for rigorous intellectual engagement and a deeper learning experience for all.

COMMUNICATION

Rutgers email - USE YOUR RUTGERS EMAIL ADDRESS

All communications to students will be done using the Rutgers email address provided to you. Please forward your Rutgers email to your personal email if necessary.

Not checking your Rutgers email is not an excuse for missing any communications.

Canvas

Posted will be the syllabus, resources (articles and examples), Power Point slides, announcements, guides, etc. To access this system, go to <http://canvas.rutgers.edu> log in, and click on the course in the dashboard. You will need to visit Canvas often for updates, deadlines and materials.

Pronouns

This course affirms people of all gender expressions and gender identities. Feel free to correct me on your preferred gender pronoun. If you have any questions or concerns, please do not hesitate to contact me.

Chosen Name (Preferred Name)

If you have a chosen name or preferred name other than what is listed on the roster, kindly let me know. If you would like to have your name changed within the rosters officially, go to:

<https://deanofstudents.camden.rutgers.edu/chosen-name-application>

DISABILITY SERVICES/ACCOMMODATIONS

The University is committed to supporting the learning of all students and faculty will provide accommodations as indicated in a Letter of Accommodation issued by the Office of Disability Services (ODS). If you have already registered with ODS and have your letter of accommodations, please share this with me early in the course. If you have or think you have a disability (learning, sensory, physical, chronic health, mental health or attentional), please contact

<https://success.camden.rutgers.edu/disability-services>.

Accommodations will be provided only for students with a letter of accommodation from ODS. Their services are free and confidential. Letters only provide information about the accommodation, not about the disability or diagnosis.

ACADEMIC INTEGRITY

The Academic Integrity policy can be found at <https://studentconduct.rutgers.edu/processes/university-code-student-conduct> <http://studentconduct.rutgers.edu/student-conduct-processes/academic-integrity/>

Students are responsible for understanding the principles of academic integrity and abiding by them in all aspects of their work at the University. Students are also encouraged to help educate fellow students about academic integrity and to bring all alleged violations of academic integrity they encounter to the attention of the appropriate authorities.

Academic Integrity means that you (the student) must:

- properly acknowledge and cite all use of the ideas, results, or words of others,
- properly acknowledge all contributors to a given piece of work,
- make sure that all work submitted as your own in a course activity is your own and not from someone else
- obtain all data or results by ethical means and report them accurately
- treat all other students fairly with no encouragement of academic dishonesty

Adherence to these principles is necessary in order to ensure that:

- everyone is given proper credit for his or her ideas, words, results, and other scholarly accomplishments
- all student work is fairly evaluated and no student has an inappropriate advantage over others
- the academic and ethical development of all students is fostered
- the reputation of the University for integrity is maintained and enhanced.

Failure to uphold these principles of academic integrity threatens both the reputation of the University and the value of the degrees awarded to its students. Every member of the University community therefore bears a responsibility for ensuring that the highest standards of academic integrity are upheld. Violations are taken seriously and will be handled according to university policy.

CODE OF STUDENT CONDUCT

Rutgers University-Camden seeks a community that is free from violence, threats, and intimidation; is respectful of the rights, opportunities, and welfare of students, faculty, staff, and guests of the University; and does not threaten the physical or mental health or safety of members of the University community, including in classroom space.

As a student at the University, you are expected adhere to the Code of Student Conduct.

To review the code, go to the Office of Community Standards:

<https://deanofstudents.camden.rutgers.edu/student-conduct>

Note that the conduct code specifically addresses disruptive classroom conduct, which means *"engaging in behavior that substantially or repeatedly interrupts either the instructor's ability to teach or student learning. The classroom extends to any setting where a student is engaged in work toward academic credit or satisfaction of program-based requirements or related activities."*

PLAGIARISM

Plagiarism means the act of passing off the work or ideas of another person as one's own.

Plagiarism can be either intentional (for example, downloading a research paper from the Internet and submitting it as one's original work), or unintentional (for example, the single improper citation of another person's statement). Both forms of plagiarism are unacceptable at Rutgers University.

EXPECTATIONS OF CLASSROOM CIVILITY

The following protocols on the codes of behavior reflect professional business norms on manners, courtesy, and respect. ***(In general, you should treat others as you would like others to treat yourself. Be mindful that what is acceptable in a text or chatroom with friends may not be appropriate in a classroom or in an online conversation with an instructor.)***

This could also include a statement regarding what your students can expect from you (*example: I will be prepared and on time for class; I will respect you and your opinions*).

- Classroom attendance is a necessary part of this course; therefore, (include specific requirements and any impact on grades).
- You are expected to do your own work. Cheating, plagiarism, and any other form of academic dishonesty will not be tolerated and will result in (include consequences).

- Meaningful and constructive dialogue is encouraged in this class and requires a willingness to listen, tolerance for different points of view, and mutual respect from all participants. All course members will be expected to show respect for individual differences and viewpoints at all times.
- The use of electronic devices can be disruptive to those around you. As a result, the use of such devices should be limited to class-related tasks.

NETIQUETTE STATEMENT

Etiquette expectations from online students

The following protocols on the codes of behavior reflect professional business norms on manners, courtesy, and respect. (In general, you should treat others as you would like others to treat yourself. Be mindful that what is acceptable in a text or chatroom with friends may not be appropriate in a classroom or in an online conversation with an instructor.)

Even though many of you are already aware of these protocols, they are explicitly stated here so that everyone is cognizant of the same protocols. These protocols should be followed by all students taking this course to help ensure the online experiences for everyone involved are pleasant. They are as follows:

- If you were to send an e-mail to the professor / tutor, please address the person appropriately such as “Dr.” or “Mr./Ms.”, not ‘Hey’. Note that I will address you with your first name, unless you prefer that I address you differently.
- When sending an e-mail, you can get better attention by using the following guidelines:
 - Use descriptive subject lines, (I am sure you have received a lot of Spam e-mails and I have occasionally and accidentally deleted student e-mails that I thought was Spam.)
 - Please be as brief as possible by going straight to the point, and if possible, limit the use of attachments

Never send offensive and insulting messages (this is a violation of the Student Code of Conduct). If you disagree, say so and state your reasons. Social media is a very powerful tool for communication. However, it can be badly misused if it is not used correctly or professionally. For example, you may have personal and legitimate concerns with this course. However, other students, who do not have similar feelings, can be negatively influenced by your concerns. This will unnecessarily and negatively affect their overall experience of the course. Therefore, to minimize such an occurrence, please feel free to directly contact the instructor/tutor first to resolve any concerns that you may have to help ensure that everyone’s online experience of this course is beneficial.

- Always guard against inciting others when it comes to content, opinions, etc. That is, avoid blaming or accusing others of wrong doing.
- Do not start a volley of back and forth e-mails, with copies distributed to every student in the class.
- Copy the minimum number of people. That is, send e-mails to only the people you think should receive and will benefit from it.
- Treat all e-mails and postings as permanent forms of written record and do not expect that any your e-mail communications to be private, unless stated otherwise. Instead, assume that all e-mail communications are public.
- Do not publicize your own or others’ personal information (such as email, phone numbers, last names, etc.)

CLASSROOM POLICIES

Exam Make-up Policy/Late Policy

If, for a university approved reason, you cannot take an exam at the scheduled time you must give the professor written notice at least one week in advance so that other arrangements can be made. If the situation does not allow for advance notification (for example, emergency hospitalization), contact the professor as soon as possible after a missed exam. Make-up exams and homework for non-university approved reasons are not guaranteed. The professor reserves the right to request written documentation to support your absence (such as a doctor's note, an obituary, or military orders).

- Students are expected to read the chapters and any relevant outside material you can find.
- Duties related to your employment or business do not provide an acceptable excuse for class absences or missed examinations. If, for a university approved reason, you cannot take an exam at the scheduled time you must give the professor written notice at least one week in advanced and then take the exam on the specified day and time.
- No incomplete will be given.

LEARNING CENTER, LEARNING SPECIALISTS AND TUTORING

I am committed to making course content accessible to all students. The Learning Center provides Learning Specialists who can help you build a learning plan based on your strengths and needs, tutors, study groups and more services. Many services are available in virtual formats and after normal business hours. If English is not your first language and this causes you concern about the course, please contact the Learning Center and make an appointment with a Learning Specialist to create a plan of action. More information and to make an appointment - <https://learn.camden.rutgers.edu/>

Writing Support and Services. The Rutgers Camden Writing and Design Lab provides personal tutoring, workshops and online. <https://wdl.camden.rutgers.edu/>

Key Spring 2025 Dates:

Spring 2025 classes begin

Last day to withdraw with a "W"

Last day of classes

Final Exam period

Tuesday, January 21st

Monday, April 21st

Monday, May 5th

Thursday, May 8th – Wednesday, May 14th

****WEEKLY SCHEDULE****

Week	Topic*	Details*	Readings*	HW/Quiz/Exam*
1/20/2025	Introduction	Syllabus and getting started - Virtual Lab; JMP software		HW1: Virtual Lab
1/27/2025	Machine Learning	Introduction to Machine Learning; Review Stat; CRISP-DM, Data Exploration	RK Chapter 2	HW2: Stat Review
2/3/2025	Machine Learning	Data Exploration and Dealing with Real Data	RK Chapters 3 and 4	HW3: Data Exploration
2/10/2025	Machine Learning	Predicting Continuous Variable: Linear Regression - Simple and Multiple	RK Chapter 5	HW4: Regression Analysis & Quiz 1
2/17/2025	Machine Learning	Predicting Categorical Variable: Logistics Regression	RK Chapter 6	HW5: Logistic Regression Analysis
2/24/2025	Machine Learning	Unsupervised Learning: Clustering	RK Chapter 9	HW6: Clustering
3/3/2025	Machine Learning	Text Mining	RK Chapter 15	HW7: Text Mining Quiz 2
3/10/2024	Machine Learning	Exam Review & Exam 1		Exam 1
3/17/2024	Spring Break			
3/24/2024	Machine Learning	Market Basket Analysis	RK Chapter 16	HW8: Market Basket Analysis
3/31/2024	Deep Learning	Neural Networks	RK Chapter 12	HW9: Neural Networks
4/7/2024	Generative AI	Generative AI Fundamentals	Provided Reading	HW10 : Generative AI Quiz 3
4/14/2024	Generative AI	Generative AI Applications Exam Review & Exam 2	Provided Reading	Exam 2
4/21/2024	Blockchain	Concepts	Provided Reading	HW11: Blockchains
4/28/2024	Blockchain	Application	Provided Reading	Quiz 4
4/29/2024		Exam Review & Exam 3		Exam 3

*Subject to modification

Using Rutgers Virtual Lab

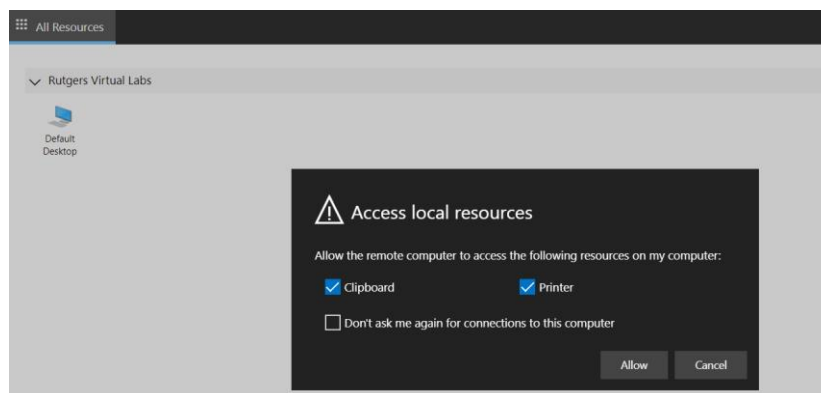
- 1) Start by going to this website: <https://rcit.rutgers.edu/virtlab>
- 2) Select “Access the Rutgers Virtual Computer Lab” (see screenshot below)



- 3) Click Default Desktop



- 4) Select Allow



- 5) Enter your credentials

All Resources Default Desktop

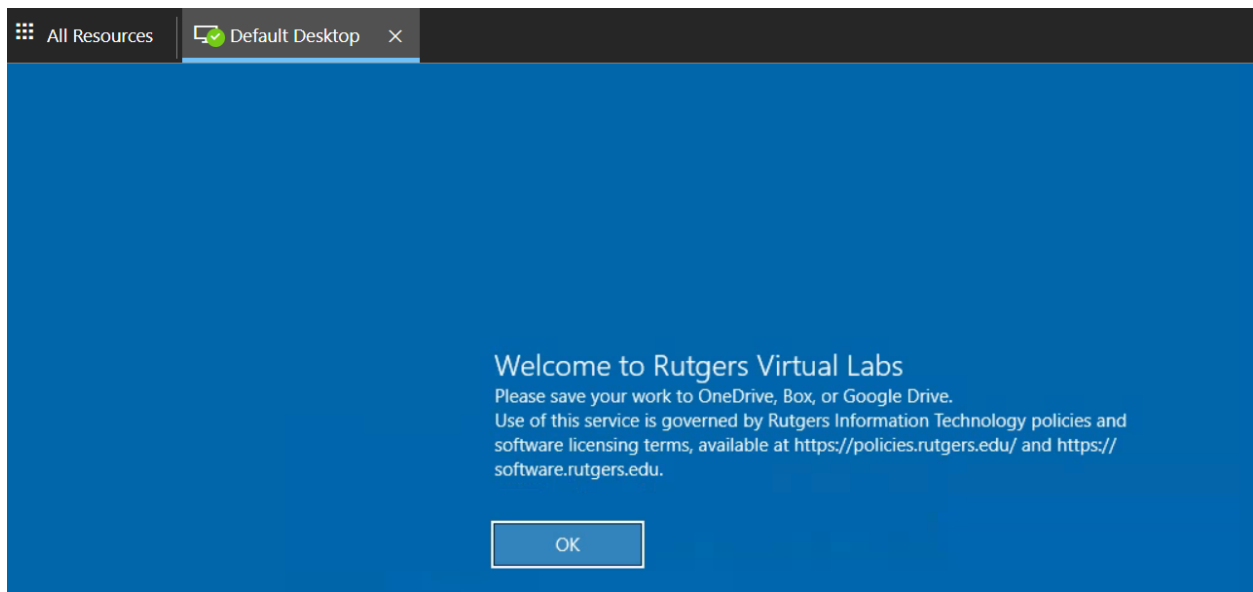
Enter your credentials

Username
jmtorres@camden.rutgers.edu

Password
Password

Submit Cancel

6) Click OK



7) Once you enter your credentials, it will take about 40-45 seconds to get into Rutgers' Virtual Lab

8) Your Rutgers Virtual Lab screen would look like this (see screenshot next page):



- 9) Once in his screen, it is just like being on any computer in Rutgers' Computer Labs. Here, you can access your Rutgers email, Canvas, Microsoft Office, MS Project, Google Chrome, Firefox, etc.
- 10) Please note that at the lower-left corner of the screen, you will see two (2) Start buttons. The one at the very bottom is YOUR computer's Start button. The one above is Rutgers' Virtual Lab Windows Start button. This is **VERY** important to recognize so that if you work on a file while being in the Rutgers' Virtual Lab environment, you **MUST** save your work in a flash drive.
- 11) **IMPORTANT:** if you logout of Rutgers' Virtual Lab without saving your file to a flash drive, your work will be lost permanently. Therefore, it is always a good practice to continuously save your file to a flash drive while working through the exercises.
- 12) To get out of Rutgers Virtual Lab, simply click the "X" next to the Default Desktop tab. This will take you back to the Rutgers Virtual Labs screen. Once there, you can just close the screen.
- 13) If you have any technical issues, please contact Rutgers IT Help Desk at 856-225-6274 (Mon-Fri)