

**HRM:38:533:542**

Professor Patrick E. Downes

**Room:** Levin 103

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**HR Decision-Making: Data-Based Decisions**

Spring 2016

Monday

Section 01: 10:00 am – 12:40 pm

Section 03: 4:30 pm – 7:10 pm

Office Hours, 203, Janice Levin Building

Tuesday: 10:00 am - 12:00 pm

Other times by appointment

Teaching Aide:

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E-mail: yt177@scarletmail.rutgers.edu

Office hours: TBD

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**Course Description:** This course is an applied course, designed to provide students an introduction to statistical techniques used to make data-based decisions. The context is human resource management, but the applications are also relevant to other business and management decisions. An emphasis is on fostering (a) a conceptual understanding of different statistical techniques so the student will know which statistical analysis is appropriate for answering a particular applied question (e.g., which training program led to higher productivity?) and (b) a practical set of skills so the student can carry out the analysis and make the correct decision.

The emphasis in this course is on developing a basic understanding of statistics commonly used in human resource management, knowing how to calculate various statistics (whether by calculator or using SPSS), and most importantly, how to interpret results.

**Texts:** There is no required textbook for this class. Any required reading will be distributed through Sakai.

An optional text for the course is: Privitera, Gregory J. (2015) Statistics for the Behavioral Sciences (2<sup>nd</sup> ed.) Thousand Oaks, CA: Sage Publications Inc. The textbook makes a very good reference tool, and has a large number of excellent tools, resources, and activities that can be helpful in understanding the material (<https://edge.sagepub.com/priviterastats2e/student-resources>).

This course makes use of SPSS for calculations. SPSS is installed on the computers that will be used by students during classes and exams. SPSS is also available on computers in all RU computer labs.

I highly recommend students purchase SPSS licenses for their own computers. If students wish they can purchase a license for SPSS which is good through June 30, 2016. SPSS will work on Win, Mac, and Linux machines. To purchase go to <http://oit.rutgers.edu/> and click on "Software Portal." Log in with your NetID. On the right-hand part of the screen you will see a list of "Featured Publishers." Click on "IBM/SPSS" and choose the software you want to license. The license fee is \$100.

In the past, students have found alternative student-friendly sites to download SPSS at a lower cost. Students in the past have also found sharing a license or computer to reduce the cost of the software. If you find an alternative for downloading the software, I recommend you send a link to me so that I can review and ensure it will meet the requirements of the course. Sometimes trial or student versions of software expires before the semester ends, or it limits the number of cases or variables you can analyze in one dataset. If the software is limited it may affect your experience in this course.

**SMLR Learning Goals:** Data-Based Decisions is designed to meet sections of two SMLR Learning Goals:

**II) Quantitative Skills – Apply appropriate quantitative and qualitative methods for research on workplace issues.**

- Formulate, evaluate, and communicate conclusions and inferences from quantitative information
- Apply quantitative methods to analyze data for HR decision making including cost-benefit analyses, ROI, etc. (HRM)

**VI) Application – Demonstrate an understanding of how to apply knowledge necessary for effective work performance**

- Apply concepts and substantive institutional knowledge, to understanding contemporary developments related to work
- Understand the internal and external alignment and measurement of human resource practices (HRM)

**Course-Specific Learning Goals:** Upon completion of this course students should understand:

1. The fundamentals of sampling and probability and the role they play in inferential statistics.
2. The use and calculation of descriptive statistics.
3. The use and calculation of statistics testing significant differences.
4. The statistics of relationships and causality.
5. The interpretation of statistics commonly used by human resource professionals.
6. Making better human resource decisions with statistics.
7. Explaining analysis outputs both orally and in writing.

In addition, the student should be familiar with SPSS:

1. Creating a dataset.
2. Defining variables
3. Transforming variables and creating new variables.
4. Performing all statistical analyses covered in the course using SPSS.
5. Interpreting SPSS output.

**Readings:** Assigned readings from the text are noted in the syllabus.

**Attendance:** Attendance at every class is required. Absences for illness, religious holidays and other events recognized by Rutgers University will be excused. If you know you are going to miss a class because of a religious holiday I would appreciate an email prior to the holiday. I know that employer demands sometimes require even the most conscientious student to miss a class. I am much more sympathetic to a rationale for an absence emailed to me before the absence than an excuse made after the fact, so if you know you will be missing a class please email me in advance. Even excused absences are not valid reasons for work not to be done.

**Examinations:** There will be two examinations as noted on the course schedule. Each examination will be worth 25% of the course grade. Each examination will have two parts. Part 1 will consist of a set of multiple choice questions covering the concepts in the course. Part 2 of the test will be handed out to each individual when they turn in Part 1. Part 2 will consist of a number of problems which will be solved using the SPSS routines covered in class.

**Make-up policy:** An examination grade of “0” will be assigned to any student who is absent without a legitimate excuse on the date of a regularly scheduled test. Legitimate excuses include illness (verified by a note from a doctor), inclement weather (only when the Rutgers Information Service (848-932-INFO) indicates that Rutgers is closed), scheduled religious holidays, business trips or events where attendance is required by an employer, when the instructor emails the class announcing class is suspended, or other dire circumstances such as a death in the family.

**Students with learning disabilities or other reasons for taking the examination outside the regular examination time should present a statement to that effect with appropriate documentation as early in the semester as possible, but certainly prior to the first midterm examination.**

A makeup exam will be held at a time convenient to the instructor when all students needing to take the makeup can be present. An examination cancelled by the instructor will be held at the next regularly scheduled class period.

**Group Project.** Students will be assigned to project groups of about three about half way into the semester. The project will consist of analyzing a data set using SPSS to answer assigned questions and to consider analyses of each group's choosing. The deliverables consist of (a) a written paper summarizing the analyses done and the conclusions drawn (75% of the project grade) and a presentation of findings (25% of the project grade). The class will be expected to question presenters on their work and part of the presentation score will be based on the quality of such questions.

**Exercises.** Assigned exercises are to be done out of class and turned in via the Assignments tab on Sakai on the date indicated on the syllabus. All exercises are worth the same number of points (5), with the total exercise grade composing 25% of the overall grade. The exercises will be posted on Sakai a week before they are due. Exercises not turned in on the due date and without a valid excuse (Legitimate excuses include illness (verified by a note from a doctor), inclement weather (only when the Rutgers Information Service (848-932-INFO) indicates that Rutgers is closed), scheduled religious holidays, or when the instructor emails the class announcing class is suspended or other dire circumstances (such as a death in the family) will receive no points. Business trips and office functions are not a valid reason for not turning exercises in on time. Exercises are due submitted to Sakai by the beginning of the class the day they are due. All exercises must be submitted to the assignments tab on sakai; paper exercises will not be accepted and will not be graded.

**Participation:** Everyone starts the class with 5 points of score for participation. Points can be lost for not being present when called on in class and for egregious classroom conduct (as described below).

**Grading:** Grades will consist of the following components:

Exam 1 (Midterm)	25%
Exam 2 (Final)	25%
Exercises	25%
Group Project	20%
Participation	5%

Both midterm and final examination have multiple choice questions and one or more problems to be worked on using SPSS. Grades will be posted to Gradebook on Sakai based on the percentage of the grade accounted for by the assignment.

**Academic Integrity:** The rights of students will be protected to insure that test scores are related to competence in the subject matter. Therefore, all examinations will be carefully proctored. If cheating is detected, it will be prosecuted to the limit allowed by University policies. An academic integrity contract is attached to this syllabus. Students must submit a signed copy of the contract before the second class they attend. ASSIGNMENTS AND EXAMS TURNED IN BEFORE THE ACADEMIC INTEGRITY CONTRACT IS HANDED IN WILL RECEIVE A GRADE OF "0."

**Classroom Conduct:** Otherwise polite students sometimes behave in an uncivil manner when taking courses. The following are NOT permitted in class:

- (a) cell phones, pagers, and text messaging devices. These should be turned off and put away OUT OF SIGHT.
- (b) laptop computers except when used for taking notes or working in SPSS. **Web surfing or reading emails or other non-course-related computer or other electronic device use will result in the student being made to leave the class; repeated offenses will result in suspension from the class.**
- (c) napping
- (d) chit-chatting with your seat neighbors
- (e) reading the newspaper (includes working puzzles contained therein)
- (f) studying or doing homework for other courses
- (g) arriving at class late on a consistent basis
- (h) leaving class early on a consistent basis
- (i) wandering in and out of class

When you are doing any of these things it is hard to argue you are participating in the class, and points will be deducted from your Participation score.

**Class Schedule  
Spring 2016  
Sections 01 & 03**

<b>Date</b>	<b>Topic</b>	<b>Recommended Reading</b>	<b>Exercises</b>
Monday January 25	Introduction to Statistics Frequency Distributions SPSS	Chapters 1 & 2	
Monday February 1	Central Tendency Variability	Chapters 3 & 4	<b>Exercise 1 due</b>
Monday February 8	Probability, normal distributions, z-scores	Chapters 5 & 6	<b>Exercise 2 due</b>
Monday February 15	Probability and sampling distributions Review	Chapter 7	<b>Exercise 3 due</b>
Monday February 22	Hypothesis testing – significance, effect size and power; One sample and two independent sample t-tests	Chapters 8 & 9	<b>Exercise 4 due</b>
Monday February 29	Related-samples t-test; Estimation and confidence intervals	Chapters 10 & 11	<b>Exercise 5 due</b>
Monday March 7	<b>MIDTERM EXAM</b>		
Monday March 14	<b>NO CLASS: SPRING BREAK</b>		
Monday March 21	Analysis of Variance	Chapters 12 & 14	
Monday March 28	Analysis of Variance (continued)		<b>Exercise 6 due</b>
Monday April 4	Correlation	Chapter 15	<b>Exercise 7 due</b>
Monday April 11	Regression	Chapter 16	<b>Exercise 8 due</b>
Monday April 18	Regression		<b>Exercise 9 due</b>
Monday April 25	Presentation of Group Projects		
Monday May 2	Review		
Monday May 9	<b>FINAL EXAM</b>		

## ***Academic Integrity Contract***

**(To be uploaded to the Assignments Tab on Sakai before start of second class)**

All members of the Rutgers University community are expected to behave in an ethical and moral fashion, respecting the human dignity of all members of the community and resisting behavior that may cause danger or harm to others through violence, theft, or bigotry. All members of the Rutgers University community are expected to adhere to the civil and criminal laws of the local community, state, and nation, and to regulations promulgated by the University. All members of the Rutgers University community are expected to observe established standards of scholarship and academic freedom by respecting the intellectual property of others and by honoring the right of all students to pursue their education in an environment free from harassment and intimidation. Please see <http://studentconduct.rutgers.edu/university-code-of-student-conduct/> for details regarding the Student Code of Conduct. Please see <http://studentconduct.rutgers.edu/academic-integrity/> for details regarding the Academic Integrity Policy.

Similarly, all students and faculty members of the academic community at the School of Management and Labor Relations should uphold high standards for personal conduct, ethical behavior, and professional integrity. In the area of academic integrity, students are expected to refrain from cheating, fabricating information, plagiarizing, inappropriately denying others access to material, and facilitating others in academic dishonesty. Please see <http://policies.rutgers.edu/sites/policies/files/10.2.13%20-%20current.pdf> (pp. 3-4) for detailed descriptions of each type of action.

Any of the following acts, when committed by a student, is an act of academic dishonesty and decreases the genuine achievements of other students and scholars. Academic dishonesty includes, but is not limited to, any of the following:

### Plagiarism/False Representation of Work

- Quoting directly or paraphrasing portions of someone else's work without acknowledging the source.
- Submitting the same work, or major portions thereof, including presentations, to satisfy the requirements of more than one course without permission from the instructor.
- Using data or interpretative material for a report or presentation without acknowledging the sources or the collaborators.
- Failing to acknowledge assistance from others, such as help with research, statistical analysis, or field data collection, in a paper, examination, or project report.
- Submitting purchased materials such as a term paper as your own work.
- Copying or presenting material verbatim from any source without using quotation marks.
- Copying from any source and altering a few words to avoid exact quotation, without the appropriate documentation or by using improper documentation of the source.
- Rewording the major concept found in a source but then omitting documentation or improperly citing the source.
- Submitting as one's own any work created by someone else (e.g., paper, project, speech, video, exercise, etc.) without crediting them. Large duplication of someone else's work should be avoided unless you obtain express permission from both the instructor and originator of the work.
- Fabricating or misrepresenting data or information
- Forging signatures

### Cheating

- Copying work on examinations.
- Acting to facilitate copying during an exam.
- Sharing answers through technology or in written or verbal form when such interactions are prohibited
- Using prohibited materials, such as books, notes, phones, or calculators during an examination.

- Working with another student on an assignment when such collaboration is prohibited.
- Stealing or having in one's possession without permission any materials, or property belonging to or having been generated by faculty, staff, or another student for the course.
- Willfully offering to do another student's work so they may represent it as their own
- Assisting another student in cheating or plagiarizing
- Doing another student's work, excluding collaborative learning assignments or joint assignments approved by the instructor.

Engaging in any of the above behaviors can result in an F on the examination or project, an F in the course, denial of access to internships, suspension for one or more semesters, or permanent expulsion from the School of Management and Labor Relations at Rutgers University.

I, \_\_\_\_\_ understand the Policies on Academic Integrity and the Student Code of Conduct at Rutgers University and the School of Management and Labor Relations. Furthermore, I understand the consequences of unethical behavior.

We all share a responsibility in creating an ethical environment. I resolve to uphold and support high standards for ethics and integrity at Rutgers University. If I see, hear, or observe violations of ethics and integrity I will report them to my instructor, Department Chair, or Dean.

Student Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Student Name (Please Print): \_\_\_\_\_

Rutgers University ID: \_\_\_\_\_