

HRM: 38:533:542 HR Decision-Making: Data-based Decisions

Spring 2020

Monday, 4:30 pm to 7:10 pm, 103 Janice Levin Building

Professor: Helen Liu
E-mail: xiangmin.liu@rutgers.edu (preferred)
Office: 208 Levin Building
Office Hours: 1:30-3:30pm, Monday. Other times by appointment.

Teaching assistant: Brittany Grevi
Email: bng31@scarletmail.rutgers.edu
Office: TA office lounge near 215 Levin Building.

Course Overview

This course is designed to increase your knowledge of statistical concepts and practices commonly used in the field of human resource management. Moreover, it helps enhance your ability to apply analytic techniques to make data-based decisions in business settings.

Learning Materials

- Privitera, Gregory J. (2016) Essential Statistics for the Behavioral Sciences. Thousand Oaks, CA: Sage Publications Inc (ISBN: 978-1-4833-5300-5). A copy is reserved for 2-hour loan at the Carr library.
- Class notes, assignment, and additional readings are available on Canvas. Please check regularly.
- Statistical software. This course makes use of SPSS for calculations. SPSS is available on computers in all RU computer labs. If you want to purchase SPSS licenses for your own computers, go to <http://software.rutgers.edu> and look for "IBM/SPSS." The license fee is \$100. Your purchase of SPSS licenses is optional.

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 EXCEL / 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.

Attendance

Your 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.

Examinations

There will be two non-cumulative in-class examinations as noted on the course schedule. Each test is worth 100 points.

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 examination.

Group Project

Students will be assigned to project groups roughly 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 (up to 100 points) and an in-class presentation (up to 50 points).

Assignments

There are Ten assignments over the course of this semester. Students are required to turn in **Eight** of these assignments for grading. Each assignment is worth 10 points. It is at the student's discretion to decide which eight assignments to turn in for grading. Assignments are **due by 10 am on the day of class**. You should hand in all assignments on time to avoid penalty due to late submission.

Participation

Students are expected to participate actively and regularly in class discussions. Moreover, students should prepare to discuss each other's project ideas and to contribute their thoughts and feedback in a generous and vigorous manner.

Grading

| | |
|---------------|------------|
| Exam 1 | 100 points |
| Exam 2 | 100 points |
| Assignments | 80 points |
| Group Project | 150 points |
| Participation | 70 points |
| <hr/> | |
| Total | 500 points |

Classroom Conduct

I encourage discussion and questions that add value to the classroom discussion. In order to avoid a number of classroom distractions, I have a policy of no electronic devices during the lecture component of each class. Cell phones, pagers, and text messaging devices should be turned off and put away OUT OF SIGHT. Laptop computers should not be open except when working in SPSS. Violations of these policies result in lost participation points.

Student Accountabilities

1. Complete all assigned readings before class. Reading assignments provide a basis for both lectures and discussions and must be completed prior to each class session. Students will be assigned chapters from the textbook. In addition, the instructor will occasionally assign

cases, practitioner essays, and research articles from various sources to supplement the textbook.

2. Contribute to class activities. Your responsibilities for class participation include but are not limited to: active listening, making thoughtful contributions, answering questions raised to you, and participating in discussions of case material with your team.
3. Complete assignments as assigned and as scheduled. Unless you have written documentation of a University approved excuse, assignments and projects are due on the assigned date. Late submission will be penalized at 10% per day.

Academic Integrity

As an academic community dedicated to the creation, dissemination, and application of knowledge, Rutgers University is committed to fostering an intellectual and ethical environment based on the principles of academic integrity. Academic integrity is essential to the success of the University's educational and research missions, and violations of academic integrity constitute serious offenses against the entire academic community.

Dishonesty of any kind will not be tolerated in this course. Dishonesty includes, but is not limited to, cheating, plagiarizing, fabricating information or citations, facilitating acts of academic dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students. For more comprehensive information on academic integrity, please refer to the academic integrity website at <http://academicintegrity.rutgers.edu>.

Access and Accommodations

Your experience in this class is important to me. If you have already established accommodations with Office of Disability Services (ODS), please communicate your approved accommodations to me at your earliest convenience so we can discuss your needs in this course.

If you have not yet established services through ODS, but have a temporary health condition or permanent disability that requires accommodations (conditions include but not limited to; mental health, attention-related, learning, vision, hearing, physical or health impacts), you are welcome to contact ODS at 848-445-6800 or dsoffice@echo.rutgers.edu.

* The instructor reserves the right to change this syllabus and course schedule during the semester as needed.

COURSE TIMELINE

| Date | Topic | Reading |
|------|-------|---------|
|------|-------|---------|

| | | |
|------|---|------------------|
| 1/27 | Introduction to data-based decisions | Chapters 1&2 |
| 2/03 | Central tendency and variability <i>EXCEL(1): Spreadsheets</i> | Chapters 3&4 |
| 2/10 | Probability, normal distribution, z-scores <i>EXCEL(2): Pivot tables</i> | Chapter 5 |
| 2/17 | Probability and sampling distributions <i>Qualtrics: Survey design</i> | Chapter 6 |
| 2/24 | Hypothesis testing (1) <i>Qualtrics: Survey distribution</i> | Chapters 7-9 |
| 3/02 | Hypothesis testing (2) <i>Qualtrics tutorial: Reporting results</i> | Chapter 10 |
| 3/09 | Exam 1 | |
| 3/16 | Spring Break | |
| 3/23 | Analysis of variance <i>Group project ideas</i> <i>SPSS: Basics</i> | Chapters 11 & 12 |
| 3/30 | Correlation (1) <i>SPSS: ANOVA</i> | Chapter 13 |
| 4/06 | Correlation (2) <i>SPSS: Correlation</i> | Chapter 13 |
| 4/13 | Regression (1) <i>SPSS: Regression</i> | Chapter 13 |
| 4/20 | Regression (2) | Chapter 13 |
| 4/27 | Team project coaching / Exam 2 | |
| 5/04 | Group presentation | |

Grading for Class Participation

Participation is graded on a scale from 0 (lowest) through 10 (highest), using the criteria below. I expect the average level of participation to satisfy the criteria for an “80”.

| Grade | Criteria |
|-------|--|
| 0 | Absent. |
| 1~35 | <ul style="list-style-type: none"> · Present, not disruptive. · Demonstrate very infrequent involvement in discussion. |
| 36~50 | <ul style="list-style-type: none"> · Demonstrate adequate preparation: knows basic case or reading facts, but does not show evidence of trying to interpret or analyze them. · Do not offer to contribute to discussion, but contribute to a moderate degree when called on. · Demonstrate sporadic involvement. |
| 51~65 | <ul style="list-style-type: none"> · Demonstrate good preparation: knows case or reading facts well, has thought through implications of them. · Contribute well to discussion in an ongoing way: responds to other students' points, thinks through own points, questions others in a constructive way. · Demonstrate consistent ongoing involvement. |
| 66~70 | <ul style="list-style-type: none"> · Demonstrate excellent preparation: has analyzed case exceptionally well, relating it to readings and other material (e.g., readings, course material, discussions, experiences, etc.). · Contribute in a very significant way to ongoing discussion: keep focused, respond very thoughtfully to other students' comments, contribute to the cooperative argument-building, suggest alternative ways of approaching material and help class analyze which approaches are appropriate, etc. · Demonstrate ongoing very active involvement. |

Academic Integrity

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: _____

Student Peer Evaluation

Your name: _____ Date _____

Instructions:

- Fill out the evaluation form listed below for all of your group members. Make sure to include yourself.
- List all of the tasks you completed for the project. In other words, what specifically did you contribute to the team effort?
- As needed, enter comments about group members below the form. Use the back of this sheet or additional sheets as necessary. (If you use the back, please indicate this on the bottom of the front page.)
- Only submit this page and any additional comment pages **to the instructor during the final presentation session.**

| Group Members Names | Quality of work | Timeliness of work | Task support | Interaction | Attendance | Responsibility | Involvement | Leadership | Overall Performance |
|---------------------|-----------------|--------------------|--------------|-------------|------------|----------------|-------------|------------|---------------------|
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

List below the specific tasks you completed for the project:

General Comments:

Student Information Sheet

*As a professor, I like to get to know my students as **individuals**. The answers to these questions will allow me to tailor the course to your strengths, make adjustments over the course of the semester, and improve the course in future years. If you don't like a question, modify it in any way that suits you.*

Your Name: _____ Preferred name: _____

1. What is your current class standing? _____ (semester/ year)
2. Are you interested in the HR Analytics concentration? (Yes, No, Maybe)
3. Please tell me something about your academic background (i.e., college major and academic interests).
4. Please tell me something about your professional experience (i.e., type of jobs, job responsibilities, for how long, etc.)
5. You must have some ideas about your career aspiration. I'd love to hear your thoughts.
6. Here are a few statistical concepts. Circle the number representing your level of familiarity with each of them. This helps me to design the course to your needs. **No points are assigned to the answers.** So relax and respond.

| | Never heard of | Beginner | Intermediate | Expert |
|--------------------|----------------|----------|--------------|--------|
| Mean | 1 | 2 | 3 | 4 |
| Correlation | 1 | 2 | 3 | 4 |
| T-Test | 1 | 2 | 3 | 4 |
| Standard Deviation | 1 | 2 | 3 | 4 |
| Histogram | 1 | 2 | 3 | 4 |

7. Do you have any suggestions and questions for the DBD class?