

HR Analytics 2
Selected Problems: HRM Analytics and Issues
Course #: 38:533:613 (Section 01, 3 credits)

Rutgers University – New Brunswick Campus
School of Management and Labor Relations
Fall 2023

Professor:	Professor Nichelle Carpenter, Ph.D.	
Email:	nichelle.carpenter@rutgers.edu	
Course Meeting:	Class Meeting Time: Thursdays 7:20pm – 10pm In-Person Classroom: Room 219 Janice Levin Building (Livingston Campus) Zoom Classroom: see Zoom tab in Canvas to join Zoom classes	
Student Hours:	Virtual office hours are held each week on ZOOM. If the available times described below do not work for you, no worries. Send me an email to find a time that works best for you. There also may be weeks where I have a meeting that conflicts with these times – I will update you on the new times.	
	Wednesdays 2:15-3:45pm	
	Schedule here: https://calendly.com/prof-carpenter/15min	Zoom link: https://rutgers.zoom.us/my/nc742?pwd=dEtITkFSOFo5NGhKM2F6RlRqc2FpZz09
Course Website:	Canvas.rutgers.edu (please get into the habit of checking Canvas for syllabus, course info, and other announcements)	
Required Textbook:	We will use an open access (i.e., free) textbook to support this course. Jhangiani, R., Chiang, I.A., Cuttler, C., & Leighton, D. C. (2019). <i>Research Methods in Psychology</i> . https://kpu.pressbooks.pub/psychmethods4e/ ISBN-13: 978-1085976923 ISBN-10: 1085976920	
Required Materials:	You must use Microsoft Office (at least Word and Excel) for projects and data analysis. Students can obtain free access through the University Software Portal: https://software.rutgers.edu/info/login/ Once you have Microsoft Excel, enable the Data Analysis ToolPak. It's easy to do, and here is a source that can help: https://support.microsoft.com/en-us/office/load-the-analysis-toolpak-in-excel-6a63e598-cd6d-42e3-9317-6b40ba1a66b4	

<p>Recommended Materials:</p>	<p>Although not required, you may find that your textbooks from previous analytics courses help you review some of the statistical concepts:</p> <p>From DBD:</p> <p>Salkind, N. J. (2022). <i>Statistics for People Who (Think They) Hate Statistics</i>. Sage Publications, Inc. Print ISBN: 978-1-0718-0388-2, E-book ISBN: 978-1-0718-0624-1.</p> <p>Salkind, N. J. (2017). <i>Statistics for People Who (Think They) Hate Statistics</i>. Sage Publications, Inc. Print ISBN: 9781483374086, E-book ISBN: 9781483374093</p> <p>From HR Analytics:</p> <p>Cascio, W. F., Boudreau, J. W., & Fink, A. A. (2019). <i>Investing in People</i> (3rd edition). Pearson Education: Upper Saddle River, NJ.</p>
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Course Description and Objectives

In this course, students will gain skills in developing and evaluating assessments that are commonly used in HR and that are essential to identifying and solving HR-related problems. In this course, we focus on important strategic decisions and steps that take place BEFORE data are collected or a survey is administered. We also build on existing analytics skills through continued data analysis. This course builds on prior analytics courses and contributes to an “analytics mindset” – we will focus on identifying relevant questions and problems within organizations, identifying the appropriate assessments linked to the problems, and carrying out the assessments in a way that provides quality information and answers.

One common critique of HR practitioners is that many decisions are made on the basis of “gut impressions” or “intuition” – this is not good and, furthermore, can get organizations into legal trouble. As a result, this course focuses on “evidence-based management”, which means the purpose is to train students how to find, summarize, and interrogate the evidence that exists for a particular problem (e.g., low engagement) or assessment (e.g., survey) and use this evidence to arrive a plan for how the problem could be solved or investigated within the organization.

At the end of this course, students will be able to (a) conduct a narrative review of relevant literature; (b) develop a survey (and develop a validation plan); (c) conduct statistical analysis on a dataset, (d) deliver persuasive and thorough professional presentations; and (e) communicate such information in succinct professional (non-jargon) writing and visualizations.

Fall 2023 Course Structure

Each week consists of **synchronous class meetings*** – these class meetings will occur in-person and remotely via Zoom. This means that we will meet live from 7:20 -10:00pm. Prior to each meeting, I expect you to complete the assigned readings, viewings, and/or assignments. I will provide brief lectures throughout our class time. However, we will use the bulk of time to complete activities that put the readings into practice and troubleshoot/discuss issues or observations that emerge.

In-Person Class Protocols: During in-person classes, my STRONG RECOMMENDATIONS are that we will:

- Practice social distancing by sitting at least 6 feet away from any person in the room
- Wear at least one face mask – covering mouth AND nose – during the entire time in the classroom.
- Minimize eating and drinking in the classroom
- Practice patience with each other – we may have to repeat ourselves and/or restate questions/comments since it may [at times] be difficult to understand each other in person.
- Demonstrate flexibility – we may have to adjust expectations and plans as the semester progresses.

***Note, that there may be occasions where an asynchronous lecture is provided to supplement course material. These lectures will be posted and announced on Canvas**

Please note that all remote sessions and office hours will be on Zoom. If you need any help connecting to Zoom, please contact the RU Help Desk (833-648-4357).

Basis of Evaluation

1. Individual Projects (average of 3 projects) = 250 points	50%
2. Quizzes (4 quizzes) = 150 points	30%
3. Participation/Attendance = 100 points	20%
Total: 500 points	100%

Grades will be assigned according to the traditional cut-offs used at Rutgers:

90-100%	= A
85-89.9%	= B+
80-84.9%	= B
75-79.9%	= C+
70-74.9%	= C
< 70%	= F

Class Projects (3) – 250 points total (50%)

Throughout the semester, you will complete 3 projects. Each project will require you to complete different research methods tasks related to HR and evidence-based management. I will provide coaching as you complete your project, but you will need to plan to spend time beyond normal class hours to work on each project.

Scope of Projects:

- **Project #1:** Create a Survey Proposal. You will develop a persuasive proposal for a survey you wish to conduct in your (hypothetical) workplace. In order to do this, you will need to complete a brief review of scientific articles on your topic (*perceptions of belonging*). Specifically, with your team, you will develop a model and survey that will answer questions such as: (a) what factors influence perceptions of belonging?; and (b) what are consequences of belonging?

The goal of this project is to learn and demonstrate how to locate relevant scientific information, articulate to your leader the relevance and benefits of a survey, and articulate your initial expectations (research questions and hypotheses). Importantly, you will communicate your findings and recommendations to a practical (NOT scientific) audience. **Deliverables are a brief team written report and a brief individual presentation, both to be uploaded to Canvas for both peer and instructor review.**

- **Project #2:** Conduct a Survey. You will create your survey – specifically, you will develop a survey protocol and use this protocol to send out your survey. Your goal is to obtain survey responses and data (from employed people) that you can use to complete Project #3. In order to complete Project #2, students will (a) identify (and justify) initial items and scales for the survey; (b) identify/recruit relevant survey respondents (with justification); (c) prepare survey for administration using Qualtrics. **Deliverables are a brief team written report, Appendix containing Survey pdf (i.e., from Qualtrics) and a brief individual presentation, both to be uploaded to Canvas for peer and instructor review.**
- **Project #3:** Analyze Survey Data. Students will analyze the dataset they collected from their survey (see Project #2) You will test your hypotheses (developed earlier in the semester), conduct a comprehensive statistical analysis of the data, and provide your HR-relevant recommendations. **Deliverables are brief team written report, team appendix containing tables and figures, and a brief individual presentation, both to be uploaded to Canvas for peer and instructor review.**

Importantly, these are team projects with both team and individual deliverables.

You must submit your project through Canvas. All submitted assignments will be evaluated via Turnitin. Please see policies regarding integrity breaches for more information about consequences of cheating and plagiarism.

More Project Information:

*****APA style – this is necessary for all written work in this course!*****

You are required to use APA style for your written deliverables and presentations (where applicable). This is most relevant for formatting, in-text citations, reference lists, tables, and figures. It is imperative that you familiarize yourself with the requirements throughout the semester (i.e., don't wait until the first assignment is due to figure this out).

Briefly, all projects must be:

- **Typed**
- **Contain 1-inch margins all around the document**
- **Use 12pt. Times New Roman font**

Here are some websites that you should consult for further assistance (more materials are located on our Canvas website):

- https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/general_format.html
- https://owl.purdue.edu/owl/research_and_citation/conducting_research/evaluating_sources_of_information/where_to_begin.html
- <https://apastyle.apa.org/>

Quizzes – 150 points (30%)

There will be five quizzes to complete throughout the semester. The purpose of each quiz is for you to demonstrate your understanding of important skills, research methods, and analytics that we will discuss this semester. For each quiz, you will submit a 1-page (maximum) memo – intended for your leader – that summarizes the important topics from each module in this course. This is your opportunity to reflect and demonstrate your understanding of course topics in your own words. Students will complete four quizzes and the final quiz is a bonus (worth 30 points)

For each quiz, please do the following:

1. Review the topics that we covered for the specific time period
 - a. For quiz 1, consider all the material up to Quiz 1
 - b. For quiz 2 &3, consider the material between Quiz 1 and Quiz 2 (and 2 & 3)
 - c. For quiz 4, consider the whole course
2. Select 3-4 topics or areas that stand out to you – think about why the topics stand out?
 - a. Is it something you can see yourself using in your own job or career? WHY?
 - b. Did it surprise you? WHY?
 - c. These are just sample questions to help you reflect
3. For your actual quiz, describe your understanding of each topic and then include points from #2 to add your reflection.
4. Remember that it's not enough to just describe, you will also need to provide additional justification to support your points. In other words, it is not enough to say "I can/cannot see myself using this at work" – please be thoughtful and describe why this is so for you.

Attendance and Participation – 100 points (20%)

I will take attendance in each class meeting. I also expect that you will review all class materials, lectures, and required media resources each week prior to attending class. This is important to ensure that we can make our in-class time active. To participate, actively participate and engage with the course materials – this means ask questions and respond to other students' questions. Be present and attentive during class sessions. Be proactive and persistent – you may need to watch or read materials a couple of times. Attend office hours! This also means working on projects early, not at the last minute.

Nine Class Rules for Professionalism

1. Actively participate and engage [class sessions, coursework, classroom participation]
2. Treat each other and professors with respect
3. Respect time (e.g., arrive on time, remain present until the end)
4. Focus on present people, responsibilities, and activities (be present physically and mentally)
5. Be Persistent – mastery of analytics requires deliberate practice, directed feedback, and honest self-reflection.
6. Demonstrate proactivity in problem solving, asking questions, and project scoping
7. Take ownership of projects and assignments
8. Communicate with others in a timely and appropriate fashion
9. Be Agile – be comfortable with uncertainty, be able to rapidly adjust to change, and be resilient.

Late Submissions

I expect students to complete all assignments and quizzes on time. I do not accept late submissions. However, I will grant one FREEBIE, no questions asked (things happen). This means that you can submit ONE assignment (project OR quiz) up to 3 days late, with no penalty.

If you have an excused reason for submitting late, I encourage you to contact with me in advance of the due date to discuss a possible accommodation.

Requests for Reconsidering a Grade

If you have questions about the evaluation or grade that your work earned, you may ask in writing to have it reviewed again and the grade reconsidered. You have seven days from the time you receive the grade to make the request. No reconsideration of grades or scoring will occur after seven days have elapsed. To do this, prepare a written statement (one or two paragraphs) explaining what you believe to be erroneous about the grade. **Please recognize that a new grade could be lower or higher than the original grade.**

Other Important, Miscellaneous Things

Students with disabilities

Students requesting accommodations for disabilities should contact the Office of Disability Services to determine his/her Coordinator. The Coordinator will then provide documentation to the student. Upon review and approval, the student must then provide this documentation to the instructor. Please refer to the Office of Disability Services for Students for more detail regarding this policy: <https://ods.rutgers.edu/>.

Media Policy

The recording and transmission of classroom lectures and discussions by students is prohibited without written permission from the class instructor and all students in the class as well as guest speakers have been informed that audio/video recording may occur. Recording of lectures or class presentations is solely authorized for the purposes of individual or group study with other students enrolled in the same class. Permission to allow the recording is not a transfer of any copyrights in the recording.

The recording may not be reproduced or uploaded to publicly accessible web environments. You cannot share any part of any recording without express written permission by all parties potentially affected by the recording.

Recordings, course materials, and lecture notes may not be exchanged or distributed for commercial purposes, for compensation, or for any other purpose other than study by students enrolled in the class. Public distribution of such materials may constitute copyright infringement in violation of federal or state law, or University policy. Violation of this policy may subject a student to disciplinary action under the University's Standards of Conduct.

***Exception:**

It is not a violation of this policy for a student determined by the Learning Needs and Evaluation Center ("LNEC") to be entitled to educational accommodations, to exercise any rights protected under Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, including needed recording or adaptations of classroom lectures or materials for personal research and study. Such recordings of lectures or class presentations is solely authorized for the purposes of individual or group study with other students enrolled in the same class. Permission to allow the recording is not a transfer of any copyrights in the recording. The restrictions on third party web and commercial distribution apply in such cases.

Destruction of Approved Recordings:

Students must destroy recordings at the end of the semester in which they are enrolled in the class unless they receive the instructor's written permission to retain them or are entitled to retain them as an LNEC-authorized accommodation.

Academic Integrity

Rutgers University takes academic dishonesty very seriously. By enrolling in this course, you assume responsibility for familiarizing yourself with the Academic Integrity Policy and the possible penalties (including suspension and expulsion) for violating the policy. As per the policy, all suspected violations will be reported to the Office of Student Conduct.

Academic dishonesty includes (but is not limited to):

- cheating
- plagiarism
- aiding others in committing a violation or allowing others to use your work
- failure to cite sources correctly
- fabrication
- using another person's ideas or words without attribution
- re-using a previous assignment
- unauthorized collaboration
- sabotaging another student's work

If in doubt, please consult the instructor. Please review the Academic Integrity Policy at:
<https://nbacademicintegrity.rutgers.edu/>.

Fall 2023 Course Schedule

Week #	Date	Location*	Topic	What is Due before Class?
1	9/7	In-Person	<p>Course Welcome and Introduction</p> <p>Create Survey Proposal (Part 1) Overview of survey steps When is survey best/appropriate?</p> <p>Note 1: Project #1 instructions posted and discussed Note 2: Project teams assigned</p>	<p>Read AFTER class:</p> <p>#1 Ch. 2 (section 7, 8) #2 Ruel (4) #3 MARS guidelines p. 7, 8 (lit search items to include) #4 Mackey et al. (2021) p. 5-8 (example lit search) (Hint: find the MARS items in Mackey et al.)</p>
2	9/14	In-Person	<p>Create Survey Proposal (Part 2) How to find/evaluate information from scientific sources How to read, code, and cite articles</p> <p>Note 1: Teams submit project topic</p>	<p>Watch: “Understanding Research Articles” [https://www.youtube.com/watch?v=-SA_J-BnuwI] 5 minutes</p> <p>Read: #1 Ch. 2 (section 7, 8) #2 How to read a scientific article #3 Ruel (5-7) #4 MARS guidelines p. 8 #5 Mackey et al. (2021) pp. 7 & 8</p>
3	9/21	In-Person	<p>Create Survey Proposal (Part 3) How to connect organizational problem to testable hypotheses, constructs, samples, and survey items</p> <p>Note: Teams submit survey constructs and at least 3 hypotheses</p>	<p>Read: #1 Ch. 2 (section 9, 10, 11) #2 Ch. 3 (section 19 & 21) #3 Ruel (33-42) #4 Spector (2013) pp. 1-3, 6-10 #5 Bennett & Robinson (2000) pp. 1-5 #6 Ferris et al. (2008) pp. 1-5</p>

Week #	Date	Location*	Topic	What is Due before Class?
4	9/28	ZOOM	Project #1 In-Class Coaching Troubleshoot Project #1: bring a rough draft of Project 1, your questions, and concerns. This class is optional and will be recorded.	Read: #1 Ch. 11 (section 48, skim the rest)
5	10/5	In-Person	Conduct a Survey (Part 1) How to use the Qualtrics survey platform How to evaluate survey items (e.g., substantive validity) Note: Project #2 instructions posted	Project #1 due today (7:20pm) Read: #1 Ch. 4 (section 20) #2 Ch. 7 (section 34-35) #3 Ruel (43, 44, 50) #4 Carpenter et al. (2016) pp. 4-8,11-14 #5 Ferris et al. (2008) pp. 3 & 4 See also: Anderson & Gerbing (1991)
6	10/12	In-Person	Conduct a Survey (Part 2) How to identify and attract sample respondents How to develop recruitment protocol	Quiz #1 due today (7:20pm) Read: #1 Ch. 7 (section 35 & 36) #2 Ruel (16, 17, 19, 24-26, 32)
7	10/19	In-Person	Conduct a Survey (Part 3) How to organize and format final survey in Qualtrics Note: Teams submit complete survey for approval at end of class.	Read: #1 Ruel (14, 51-56, 66)
8	10/26	Zoom	Project #2 Coaching Week – no class We will not meet during class time this week. On Tues 10/24 and/or Wed 10/25, you will meet with me to review your survey and codebook so that on 10/26 you have completed your survey and can send it out.	Teams must have their survey codebook and final survey approved by 10pm on 10/26. Read: none

Week #	Date	Location*	Topic	What is Due before Class?
9	11/2	In-person	Analyze Survey Results (Part 1) How to download/ clean raw dataset (you will need codebook)	Read: Ruel (61, 62, 68-70)
10	11/9	Zoom	Analyze Survey Results (Part 2) How to run initial descriptive statistics How to evaluate reliability evidence How to evaluate variable distributions How to conduct hypothesis testing (review) Note: Project #3 instructions posted and discussed	Project #2 due today (7:20pm) Read: #1 Ch. 12 #2 Salkind Chs. 2-4 & 7 #3 Ch. 13
11	11/16	In-Person	Analyze Survey Results (Part 3) How to run t-tests (review) How to run ANOVA (review) Troubleshooting other analyses	Quiz #2 due no later than today Read: #1 Salkind Ch. 12-13 #2 Salkind Ch. 14
12	Tues 11/21* **	Zoom	IMPORTANT: The week of Thanksgiving, our class meets on TUESDAY 11/21 instead of THURSDAY 11/23. Analyze Survey Results (Part 4) How to run correlation (review) How to run regression and multiple regression (review) Troubleshooting other analyses	Read: #1 Salkind Ch. 6 #2 Salkind Ch. 16-17
13	11/30	In-person	Analyze Survey Results (Part 5) How to present survey results in writing, tables, and presentations.	Read: #1 supplemental Ch. 2 posted #2 supplemental Ch. 7 posted See also Salkind Ch. 5
14	12/7	Zoom	Project #3 In-Class Coaching Troubleshoot Project #3: bring a rough draft of Project 3, your questions, and concerns. This class is optional and will be recorded.	Quiz #3 due today (7:20pm)

Week #	Date	Location*	Topic	What is Due before Class?
15	Friday Dec. 15		Project 3 due by 11:59pm ET on FRIDAY 12/15	Quiz #4 due today (7:20pm)

*Dates currently scheduled as “in-person” are subject to change. I will communicate any changes to schedule and location as quickly and as far in advance as possible. Please check email and Canvas page in advance of all classes.