HMG 6589C APPLIED MULTIVARIATE ANALYSIS FOR TOURISM AND HOSPITALITY
SPRING 2024

Department of Tourism, Hospitality and Event Management
College of Health & Human Performance; University of Florida

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Course Hours and Location
FLG 0235 Tue (9:35 am - 10:25 am)
WEIL 408E Tue (10:40 am – 12:35 pm)
OFFICE HOURS: **Thursday @ 10:30 am – 12:30 pm or by appointment**
Zoom link: https://ufl.zoom.us/s/92504787428

COURSE DELIVERY AND COMMUNICATION WITH INSTRUCTOR

This course has a traditional, face-to-face format. There will be no Zoom backup unless officially required by the university, but PPTs of class lectures will be provided.

Communication with the instructor should be maintained via Canvas mail. Your message will be immediately directed to the instructor's UF e-mail box. Using the instructor's e-mail creates issues with keeping the course records straight. Use Canvas mail for questions related to grades, special circumstances, needed accommodations, and similar. Expect a response within 24 hours, not including weekends and holidays.

COURSE DESCRIPTION

The course focuses on building students' data analysis skills using "real life" data from tourism, leisure and well-being, hospitality, sports, and related fields. Combining lecture and lab instruction, the course teaches advanced statistical techniques used in social research to analyze data to inform managerial decisions.

The course provides an overview of several multivariate methods and emphasizes the differences between the methods, the application of these methods to practical problems, the reporting of findings, and the interpretation of results. The methods include factorial ANOVA, MANOVA, exploratory factor analysis, cluster analysis, multiple regression, and introduction to structural equation modeling (path analysis and confirmatory factor analysis).

COURSE OBJECTIVES

- Identify and recognize analytical scenarios that require the following multivariate approaches: factorial ANOVA, MANOVA, EFA, Cluster analysis, Multiple regression, Path analysis, and CFA using textbook materials, readings of the articles, lectures, and lab presentations and assignments.

- Demonstrate comprehension of various methods of multivariate data analysis introduced by the instructor in lectures and lab presentations through quizzes, individual lab assignments, and group projects.

- Apply various multivariate statistical techniques to problems arising in tourism, hospitality, leisure, sports, and related fields using training datasets. Demonstrate competencies through explanation of the rationale for using a certain method, ability to conduct the analysis, and written interpretation of results in submitted assignments.

- Independently formulate research questions, state hypotheses, select appropriate statistical techniques, test how data fit assumptions of the selected method, and evaluate, report, and interpret test results.

- Practice oral and written skills in presenting the results of statistical analyses. Demonstrate skill through the presentation of projects as well as the submission of written reports.

- By the end of the course students should be able to design and carry out a data analysis project in tourism, hospitality, destination management, leisure, sports, or related fields based on one of the provided datasets using several multivariate techniques, interpret the results, and summarize them in the written report.

PREREQUISITES

HLP 6515 Evaluation Procedures in Health and Human Performance and HLP 6535 Research Methods. Similar courses on research methods, introductory statistics, and data analysis are subject to the instructor's approval. Students need basic knowledge of the SPSS interface and the ability to conduct tests covered in HLP 6515.

SOFTWARE

The course uses SPSS Statistics GradPack™ for Windows, which is a full version of the SPSS software (SPSS Base, SPSS Regression & SPSS Advanced Statistics), including the AMOS module. Lab instructions are conducted in the UF CIRCA labs.

TEXTBOOKS AND MATERIALS

1. Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. Multivariate Data Analysis, 7th edition. Prentice Hall: Upper Saddle River, N. J., ISBN: 0138132631. **This is the main text.**

2. Pallant, J. (2007). SPSS Survival Manual: A Step-by-Step Guide to Data Analysis Using SPSS for Windows, version 15, 3rd ed. McGraw-Hill. **Recommended.**

3. Andy Field. Discovering Statistics Using IBM SPSS Statistics, 4th Edition. **This is a useful resource for several topics.**

ATTENDANCE

Attendance is expected of students enrolled in this course. Instructor follows the US policy regarding attendance and excused absences: https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/

> *Acceptable reasons for absence from or failure to engage in class include illness; Title IX-related situations; serious accidents or emergencies affecting the student, their roommates, or their family; special curricular requirements (e.g., judging trips, field trips, professional conferences); military obligation; severe weather conditions that prevent class participation; religious holidays; participation in official university activities (e.g., music performances, athletic competition, debate); and court-imposed legal obligations (e.g., jury duty or subpoena). Other reasons (e.g., a job interview or club activity) may be deemed acceptable if approved by the instructor.*

A student who finds themselves in one of those circumstances should talk to the instructor first and then follow the steps outlined here: https://care.dso.ufl.edu/instructor-notifications/

If you missed a class, check the materials on the Canvas course website. Check with your fellow students about special information and announcements. **Five unexcused absences (out of 15 class meetings) result in one full letter grade drop in the overall course score.**

ASSIGNMENTS AND EVALUATION

There will be lab assignments, quizzes, student presentations, and term project in the course:

- Quizzes (6): 20% (the lowest score is dropped)
- Homeworks (7): 30% (the lowest score is dropped)
- Critical review of a research article and presentation: 20% (10% + 10%)
- Term Project data analysis paper and presentation: 30% (15% + 15%)

TOTAL: 100 %

Grading Scale:

A- = 90-92.99% (3.67)	A = 93-100% (4.0)		
B- = 80-82.99% (2.67)	B = 83-86.99% (3.0)	B+ = 87-89.99% (3.33)	
C- = 70-72.99% (1.67)	C = 73-76.99% (2.0)	C+ = 77-79.99% (2.33)	
D- = 60-62.99% (0.67)	D = 63-66.99% (1.0)	D+ = 67-69.99% (1.33)	E = 59.99% or lower (0.0). Failing grade.

More information about UF grade policies can be found here: https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/#gradingpoliciestext

Assignment grades will be posted on Canvas within 2 weeks after the assignment is submitted. Students will be able to monitor their overall course grades throughout the semester. If you notice a scoring error, notify the instructor as soon as possible. No issues regarding scoring will be reviewed after the official "end of the semester" date. **The final course grade will not be rounded.**

QUIZZES

This class does not have a midterm or a final exam. Instead, quizzes are used to assess how well you are following the material. Quizzes usually cover the material from the previous two or three weeks but expect occasional questions related to the earlier topics. **Quizzes are submitted via an attached file on Canvas**. A 100% grade will require complete and correct answers to all questions. A quiz not returned will earn 0 points. Partial credit is given to incomplete answers.

LAB ASSIGNMENTS AND HOMEWORK

Each week has a lab data analysis assignment. You start doing an assignment in class and finish at home. You will submit these assignments as seven homeworks. Make sure that your work is well organized and easy to understand. Take time to interpret your results, as simple posting of SPSS tables is not enough. Pay attention to reporting all necessary statistics to support your conclusions. The submission of homework is via Canvas, which requires your document to be in either MS Word or PDF format.

ARTICLE PRESENTATION AND CRITICAL REVIEW PAPER

Throughout the course, each student will make a written critical review of a research article that uses one of the methods covered in the course and a presentation of that review to the class. This is an individual assignment.

TERM PROJECT

Students need to demonstrate competencies they have obtained in the course. Students work either individually or in pairs on a problem of their interest. Students will select one of the datasets provided by the instructor. Students should formulate a problem/question(s) of the research and explore the dataset with reference to that question using analyses studied in the course. Project results are communicated via a class presentation, and the Term Project written report is submitted one week after the presentation.

SUBMISSION POLICIES

MISSED SUBMISSIONS: The instructor follows the UF submission policy related to absences and missed assignments: https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/

Follow closely the course logistics concerning the submission of your work. The lowest score in the Quiz and Homework assignment groups is dropped; therefore, your overall grade is not affected by missing one deadline in each category. **The score of "0" is NOT dropped if received as a penalty for violation of the Honor Code.** Students who missed the work due to the reasons outlined in the UF attendance policy will receive a comparable assignment and a reasonable time to complete it.

A student who misses their presentation will have a zero grade for the assignment. If the student is unable to deliver a presentation due to a confirmed medical reason or family emergency, it will be rescheduled for a later date if the class schedule permits. If the schedule does not allow it, the presentation will be substituted with an exam. **Late submissions and make-ups interfere with course management, therefore, late submissions for reasons other than listed in the UF policy will not be accepted.**

Allow for technical difficulties while submitting the assignment and do not wait until the last minute. Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received

from the UF Computing Help Desk when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST message your instructor within 24 hours of the technical difficulty if you wish to request a make-up. UF Computing Help Desk: https://helpdesk.ufl.edu/

CLASS POLICIES

Come to class on time to avoid disruptions. Turn off cell phones. Computers are allowed as a learning tool – to follow the lecture or take notes. Please refrain from using the Internet, checking e-mails, and other activities unless they are directly related to the course. Be prepared to participate in class. Be courteous and respectful to your peers, guests, and the instructor. You can bring bottled water or coffee in spill-proof cups to class. Please refrain from eating in class.

SPECIAL ACCOMMODATIONS

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, https://disability.ufl.edu/) by providing appropriate documentation. Once registered, students will receive an accommodation letter. The same letter is forwarded to the instructor by the DRC office. **IMPORTANT: Students must contact the instructor to activate course adjustments based on the DRC letter.** Students with disabilities should follow this procedure as early as possible in the semester.

COURSE CALENDAR

This is a tentative schedule which may change. All changes will be announced in writing via Canvas.

Week	Class Date	Tuesday 9:35am FLG 235 10:40 am-12:35 pm Weil 480E	Due Mon, the day before class	Due dates are announced in class
W1	9-Jan	Intro to Multivariate Analysis		
W2	16-Jan	Factorial ANOVA		
W3	23-Jan	MANOVA	HW1	Q1
W4	30-Jan	Exploratory Factor Analysis EFA	HW2	Q2
W5	6-Feb	EFA: Data Reduction	HW3	
W6	13-Feb	Cluster Analysis	HW4	Q3
W7	20-Feb	Factor-Cluster Analysis		
W8	27-Feb	Multiple Regression 1	HW 5	
W9	5-Mar	Article Presentations. The written review is due March 8		
W10		No class: Spring break		
W11	19-Mar	Multiple Regression 2		
W12	26-Mar	Multiple Regression 3	HW6	Q4
W13	2-Apr	Multiple Regression 4		
W14	9-Apr	Path Analysis	HW7	Q5
W15	16-Apr	Confirmatory Factor Analysis CFA		
W16	23-Apr	Term Projects Presentations. The written paper is due Apr 29		

CRITICAL REVIEW OF A RESEARCH ARTICLE GUIDELINES

This is an individual assignment. Throughout the course, each student will make a **(1) written critical review of a research article** that uses one of the methods covered in the course and **(2) presentation of**

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that review in class. Choose an article from your field from a reputable but not a stellar journal. It is recommended to avoid *Tourism Management*, *Annals of Tourism Research*, and *Journal of Travel Research*. These journals have a very rigorous review process, and you might find it difficult to critique articles published in these journals from a methodological standpoint. Select an article that uses one of the following statistical methods: Factorial ANOVA, MANOVA, Factor Analysis, Cluster Analysis, or EFA-Cluster Analysis combinations as the primary method of analysis. Spend some time selecting your article to fully understand its subject matter and methodology used. **A copy of the article and a PPT should be submitted to the instructor no later than right after the class where presentations are made, and preferably the day before.**

In the written review, students incorporate feedback received during the presentation. The written report is a Turnitin assignment that checks the originality of your paper (similarity score). Aim at under 15%. You can use iThenticate software to check this score before submission: all UF students have **free-of-charge** access to the software (www.ithenticate.com).

Formatting Guidelines for Review
Use formatting guidelines and reference style of the journal where the article that you reviewed was published. The length of the review is 1000-1300 words.

Content
The review is NOT an overview or a summary of a research article. **You should evaluate the article critically,** paying attention to the aspects listed below:
- Overall research purpose: is it clear what problem the paper addresses, what's its significance, what gaps in theory, methodology, or practice the study fills?
- Are the purpose, objectives, and research questions sufficiently delineated? Are research questions aligned with the research objectives?
- Methodological approach the authors have taken to achieve stated objectives and to answer the research questions.
- Conceptualization of the constructs – address clarity and content validity.
- Operationalizations of variables (latent and observed) and quality of the instrument (e.g., survey items)
- Approach to sampling, data collection, and overall quality of the data: does it follow the best practices of conducting research and/or reporting?
- Statistical analyses used: appropriateness, assumptions, correctness of application, and clarity of explanation and reporting.
- Justification of conclusions and implications. Do they follow the findings? Did the authors discuss broader implications for theory and practice?
- Limitations: are they properly discussed?
- Communication and presentation of the article. Pay attention to style, structure, tables and figures, level of detail, and other formatting issues that are important to facilitate understanding.

Grading Expectations for Written Article Review:
- **90-100: Excellent.** Excellent, scholarly, and advanced college-level work that exceeds requirements. Original, insightful ideas, in-depth discussion. Well organized and structured. Very good grammar, and careful formatting.

- **80-90: Good.** Good college-level work that meets requirements. Original, well organized. A good understanding of the topic is demonstrated. Acceptable grammar. Some areas are noticeably weaker than others.
- **70-80: Satisfactory.** Average work. Assignment is not thought through and/or presentation is not cohesive. Improvement is needed in the depth of analysis, originality of thought, structure, and presentation.
- **60-70: Marginal.** Below-average work. Substantial improvements are needed in the areas of content, reasoning, and delivery, as well as grammar and formatting.
- **0-60: Failure.** The assignment is not submitted or incomplete.

In-class presentation of your review/critique is 15 minutes and 5 minutes are budgeted for questions from the audience and feedback from the instructor. Your presentation is assessed using the following criteria:
- **SUITABILITY:** The choice of article is suitable for the assignment.
- **CONTENT:** Clear, concise, and well-structured review of the article's aspects listed in section Content. A presenter demonstrates a full understanding of the article. Remember that you cannot include everything in your presentation, so be selective and aim for maximum impact.
- **CREATIVITY AND INTERACTIVITY:** Presentation generates interest from the audience.
- **OVERALL IMPRESSION:** Quality of slides, time management, professional delivery, competent handling of questions from the audience.

TERM PROJECT DATA ANALYSIS GUIDELINES

Students will work individually or in pairs. Instructor provides several datasets obtained in tourism studies, and various research questions may be investigated using any given dataset. A description of a sample and data collection procedure accompanies each dataset. Students should formulate a problem for which dataset is suitable and explore the dataset with reference to that problem using analyses studied in the course. Project results will be presented to the class, and the term paper will be submitted one week after the presentation.

IMPORTANT: If a student chooses to use their data or a dataset obtained from their adviser(s), they should make sure that the adviser approves of this arrangement. Such an arrangement needs the approval of the course instructor as not all datasets are suitable to demonstrate competencies that are being built by the course. The dataset should be accompanied by survey questions, and the link between questions and variables in the dataset should be clear. How variables are coded should be specified.

Students must inform the instructor about the topic of their term project and the dataset they intend to use no later than the first class after the Spring Break. It is advisable to meet with the instructor at least once before the presentation to discuss progress with the term project. It is the student's responsibility to initiate/arrange the meeting.

Formatting Guidelines for Term Project

Term paper should follow the structure of a typical journal paper: Introduction, Study Background/Literature review, Method, Results, and Discussion/Conclusion. The format follows requirements specified by *Tourism Management* journal or any other reputable journal:
https://www.elsevier.com/journals/tourism-management/0261-5177/guide-for-authors
On p. 11:
- Make sure you use uniform lettering and sizing of your original artwork.

- Preferred fonts: Arial (or Helvetica), Times New Roman (or Times), Symbol, Courier.
- Number the illustrations according to their sequence in the text. […]

Check your paper against the recommendations presented in the file *Successful Writing Hints* (see the folder *Additional Materials* on Canvas/Files). Paper submission is via Canvas, which requires your manuscript to be in .doc, .docx, or .pdf format. In your written review you incorporate feedback received during the presentation. The written report is a Turnitin assignment that checks the originality of your paper (similarity score). Aim at under 15%. You can use the iThenticate software to check this score before submission: all UF students have free-of-charge access to the software (www.ithenticate.com).

Grading Expectations for Term Paper:
- **90-100: Excellent.** Excellent, scholarly, and advanced college-level work that exceeds requirements. Original, insightful ideas, in-depth discussion. Well organized and structured. Very good grammar, and careful formatting.
- **80-90: Good.** Good college-level work that meets requirements. Original, well organized. A good understanding of the topic is demonstrated. Acceptable grammar. Some areas are noticeably weaker than others.
- **70-80: Satisfactory.** Average work. Assignment is not thought through and/or presentation is not cohesive. Improvement is needed in the depth of analysis, originality of thought, structure, and presentation.
- **60-70: Marginal.** Below-average work. Substantial improvements are needed in the areas of content, reasoning, and delivery, as well as grammar and formatting.
- **0-60: Failure.** The assignment is not submitted or incomplete.

The presentation is 20 minutes and 5 minutes are budgeted for discussion, questions from the audience, and feedback from the instructor. Prepare this assignment as a presentation for a conference. This means that no additional time will be allowed; therefore, good time management is critical. Remember that you cannot include everything in your presentation: be selective and aim for maximum impact. You can include more information in your term paper. Your presentation will be assessed using the following criteria:

- **CONTENT:** Overall understanding of the problem and surrounding issues. Methods are appropriate, conclusions are justified, and implications are discussed.
- **STRUCTURE:** Clear, concise, and well-structured presentation. All components necessary for understanding are presented.
- **CREATIVITY AND INTERACTIVITY:** Presentation generates interest from the audience.
- **OVERALL IMPRESSION:** Quality of slides, time management, professional delivery, competent handling of questions from the audience.

UF POLICIES AND RESOURCES

ACADEMIC HONESTY

The plagiarism and other violations of the academic honesty will be punished with 0% grade for the assignment; the offender will be reported to the head of department and/or graduate school for

possible actions. The UF defines plagiarism in the following way (https://flexible.dce.ufl.edu/media/flexibledceufledu/documents/uf_policy_student_conduct.pdf): *"Plagiarism. A student shall not represent as the student's own work all or any portion of the work of another. Plagiarism includes but is not limited to:*

1. Quoting oral or written materials including but not limited to those found on the internet, whether published or unpublished, without proper attribution.

2. Submitting a document or assignment which in whole or in part is identical or substantially identical to a document or assignment not authored by the student."

Further, each student is expected to abide by the Honor Code: "UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class."

Please refer to the abovementioned Honor Code for a complete explanation of the University of Florida Academic Honesty Policy.

COURSE EVALUATIONS

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at https://evaluations.ufl.edu . Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results/

HEALTH AND WELLNESS

Health and Wellness

If you or a friend is in distress, please contact umatter@ufl.edu or 352 392-1575 so that a team member can reach out to the student.

- Counseling and Wellness Center: https://counseling.ufl.edu/, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.
- Sexual Assault Recovery Services (SARS): https://umatter.ufl.edu/helping-students/sexual-violence-response/
- Student Health Care Center, 392-1161. https://shcc.ufl.edu/
- University Police Department, 392-1111 (or 9-1-1 for emergencies). http://www.police.ufl.edu/ .