HMG 6589C APPLIED MULTIVARIATE ANALYSIS FOR TOURISM AND HOSPITALITY
SPRING 2022

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

Instructor

Svetlana Stepchenkova, Ph.D.
Associate Professor
Department of THEM
College of HHP
University of Florida
Rm. FLG 186C; 352.294.1652
svetlana.step@ufl.edu

Department Chair

Rachel Fu, Ph.D.
Professor
Department of THEM
College of HHP
University of Florida
Rm. FLG 242
racheljuichifu@ufl.edu

Course Hours and Location

FLG 0235 Tue (9:35 am - 10:25 am)
WEIL 408D Tue (10:40 am – 12:35 pm)
OFFICE HOURS: Thursday @ 1-3 pm
Zoom link: https://ufl.zoom.us/j/94185364982

COURSE DELIVERY AND COMMUNICATION WITH INSTRUCTOR

This course has a traditional, face-to-face format. There will be no zoom back-up 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 forwarded to the instructor's UF e-mail box. Using personal e-mail creates issues with keeping the course records straight. 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 in order to inform managerial decisions.

The course provides an overview of several multivariate methods and emphasizes differences between the methods, application of these methods to practical problems, reporting of findings, and 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 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, evaluate, report, and interpret test results.
- Practice oral and written skills in presenting results of the statistical analyses. Demonstrate skill through presentation of projects as well as 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. Basic knowledge of SPSS interface and ability to conduct tests covered in HLP 6515. Materials for a quick review and assessment of the readiness level are made available.

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

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%	A = 93-100%		
B- = 80-82.99%	B = 83-86.99%	B+ = 87-89.99%	
C- = 70-72.99%	C = 73-76.99%	C+ = 77-79.99%	
D- = 60-62.99%	D = 63-66.99%	D+ = 67-69.99%	E = 59.99% or lower

Grades will not be rounded. If you noticed a scoring error, notify the instructor within one week that a scoring error is made.

QUIZZES

This class does not have a midterm or the 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 lectures, but expect occasional questions related to the earlier topics. **Quizzes are submitted via an attached file on Canvas**. 100% grade will require complete and correct answers to all questions. A quiz not returned will earn 0 points. Partial credit is given to attempted but incomplete answers. **Late submissions are not accepted.** Answers to quiz questions are published after the due date.

LAB ASSIGNMENTS AND HOMEWORK

Each week has a lab data analysis assignment (12 labs) which you start doing in class and finish at home, and 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. **Late submissions are not accepted.**

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 class. This is an individual assignment. **Late submissions of the written critical review is penalized by 15% grade reduction.**

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. **Late submissions of the Term Project written report is penalized by 15% grade reduction.**

SUBMISSION POLICIES

Familiarize yourself with submission deadlines for HW and quizzes as these are different. Because of multiple assignments in this course, it is important to closely follow the course "logistics" with respect to submission of your work. Late submissions for quizzes and homeworks create problems with grading and overall course management and, therefore, not allowed. The lowest score for quizzes and for homeworks is dropped; therefore, your overall grade will not be affected by missing a deadline for one assignment. **The score of "0" is NOT dropped if received as a penalty for violation of the Honor Code.** All emergences or special circumstances (e.g., religious observances or important family events) that prevent you from submitting on time have been cared for by this "one miss does not count" policy; therefore, there is no need to negotiate with the instructor. Further, you are given at least a week to complete the assignment; therefore, reasons that can be foreseen like a short travel or minor sickness are not accepted as valid excuses.

IMPORTANT: *A student experiencing an illness should visit the UF Student Health Care Center or their preferred healthcare provider to seek medical advice and obtain documentation. If you have an illness, family emergency or death, please contact the Dean of Students Office (www.dso.ufl.edu) and follow the DSO Care Team procedures for documentation and submission of a request for make-up assignment (https://care.dso.ufl.edu/instructor-notifications/). The DSO will contact the instructor. Do not provide any documentation to the instructor regarding illness or family emergency. This is your personal and protected information. The DSO is qualified to receive and verify the documents you provide. The instructor will follow the recommendations from the DSO.*

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

Get to class on time to avoid disruptions. Turn off cell phones. Computers are allowed as a learning tool. Please refrain from using the Internet, checking e-mails and other activities unless they are directly related to the course.

Attendance

Requirements for class attendance and make-up assignments are consistent with university policies that can be found at: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx. Notify the instructor of your absence in advance if possible. Each class counts as two attendances: lecture and lab. Six absences result in reducing the final grade by 10%. Ten absences result in a failing grade for the course.

Skipping a quiz

Student athletes and those traveling on university business will be accommodated with respect to making-up for missed quizzes. Official documents must be presented.

Food

You can bring bottled water or coffee in spill-proof cups to class. No food is allowed in the lab (Weil 408D).

Special accommodations

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

COURSE CALENDAR

Week	Class Date	Tuesday 9:35am FLG 235 10:40am-12:35pm Weil 480D	Due Mon, the day before class	Due dates announced in class
W1	11-Jan	Syllabus. Intro to Multivariate Analysis		
W2	18-Jan	Factorial ANOVA		
W3	25-Jan	MANOVA	HW1	Q1
W4	1-Feb	Exploratory Factor Analysis EFA	HW2	Q2
W5	8-Feb	EFA: Data Reduction	HW3	
W6	15-Feb	Cluster Analysis	HW4	Q3
W7	22-Feb	Factor-Cluster Analysis		
W8	1-Mar	**Article Presentations. Article, PPT is due before the class starts. Written review is due Mar 6**		
W9	8-Mar	No class: Spring break		
W10	15-Mar	Multiple Regression 1	HW5	
W11	22-Mar	Multiple Regression 2	HW6	
W12	29-Mar	Multiple Regression 3		Q4
W13	5-Apr	Path Analysis	HW7	Q5
W14	12-Apr	Confirmatory Factor Analysis CFA		Q6
W15	19-Apr	**Term Projects Presentations. PPT is due before the class starts. Written paper is due Apr 26**		

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 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 combinations as the primary method of analysis. Spend some time selecting your article to fully

understand it in terms of its subject matter and methodology used. **A copy of the article and a PPT should be submitted to the instructor prior to a presentation date.**

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

Formatting Guidelines for Review

One inch margins on all sides, 1.5 spacing between lines, paragraphs are indented; fonts to use are Times New Roman, Arial, or Calibri. **At the top of your paper, provide reference to the reviewed article in APA style.** 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, clarity of explanation and reporting.
- Justification of conclusions and implications. Do they follow from 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 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, careful formatting.
80-90: Good. Good college-level work that meets requirements. Original, well organized. 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 on depth, 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. 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: Choice of the article is suitable for the purpose of the assignment.
CONTENT: Clear, concise, and well-structured review of the article's aspects listed above. Presenter demonstrates 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 on a problem of their interest. Students can collect their own data, use secondary data, or take one of the datasets offered by the instructor. Students should formulate a problem/goal of the research and explore the dataset with reference to that problem using analyses studied in the course. Project results will be presented to class, and term paper will be submitted one week after the presentation.

Instructor presents several datasets obtained in tourism studies, and various research questions may be investigated using any given dataset. The description of the sample and the data collection procedure accompanies each dataset.

IMPORTANT: If a student chooses to use their own data or a dataset obtained from their adviser(s), they should make sure that the adviser approves of this arrangement. The dataset must be approved by the course instructor. 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 clearly specified.

Students should 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 students' responsibility to initiate/arrange the meeting.

Formatting Guidelines for Term Project

Term paper should follow a structure of a typical journal paper: Introduction, Study Background/Literature review, Method, Results, and Discussion/Conclusion. Use one-inch margins on all sides, 1.5 spacing between lines, paragraphs are indented; fonts to use are Times New Roman, Arial, or Calibri. There are no firm guidelines as to the length of the paper, but it should include all required parts (Introduction, Background/Litreview, Method, Results, and Discussion plus tables, figures, and references. Use APA style for references. Notice that Google Scholar allows you to obtain references in several popular formats – APA, Chicago, or Harvard.

Check your paper against 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. This is a Turnitin assignment: **check originality of your writing using iThenticate software (free for UF students)**. The similarity score should not exceed 15%.

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, careful formatting.
80-90: Good. Good college-level work that meets requirements. Original, well organized. 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 on depth, 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. Assignment is not submitted or incomplete.
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.

ACADEMIC HONESTY

This class has many assignments, and it is beneficial to study with fellow students to help one another along. However, **the final version of the assignment that you submit should be your own work**. Do not copy the work of another student: it is counterproductive to let someone else do your thinking. 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 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.

Miscellaneous Links

Campus Resources

Health and Wellness

U Matter, We Care:

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: http://www.counseling.ufl.edu/cwc/Default.aspx, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Assault Recovery Services (SARS)

Student Health Care Center, 392-1161.

University Police Department, 392-1111 (or 9-1-1 for emergencies). http://www.police.ufl.edu/

Academic Resources

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. https://lss.at.ufl.edu/help.shtml.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling. http://www.crc.ufl.edu/

Library Support, http://cms.uflib.ufl.edu/ask. Various ways to receive assistance with respect to using the libraries or finding resources.

Information on current UF grading policies for assigning grade points: https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx.

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/