



**BUSN 6303**  
**Advanced Regression Analysis**  
**Fall 2018**

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**Instructor:** Matthew Griffith, PhD  
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**Office Location:** Business Administration Building 228  
**Office Hours:** Tuesday 9:15 - 10:30 am  
Thursday 9:15 - 10:30 am, 1:20 - 2:30 pm  
**Meeting Times:** 1:30 - 4:20 pm Tuesday  
**Meeting Location:** Business Administration 310

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### **Course Description**

This course is a study of linear and nonlinear regression methodologies, elementary time series analysis, and other introductory econometric topics. The course is designed to provide basic expertise in the application of econometric techniques to hypothesis testing, model building, diagnostic testing, and simulations analysis.

### **Learning Objectives**

By the end of the course, students should be able to:

1. Choose the correct multivariate statistical procedure based on research question, study design, and data measurement.
2. Run regression and other multivariate statistical procedures including factor analysis, path analysis, and covariance-based structural equation models in SPSS and SAS.
3. Appropriately interpret statistical output of regression and multivariate procedures generated by a software package.
4. Summarize results of analysis in professional written reports.

## Text

### Required

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Upper Saddle River, NJ: Prentice Hall. ISBN: 9780138132637

O'Rourke, N. & Hatch, L. (2013). *A step-by-step approach to using SAS for factor analysis and structural equation modeling* (2nd ed.). Cary, N.C.: SAS Institute Inc. ISBN: 9781599942308

### Recommended

Field, A. (2018). *Discovering statistics using IBM SPSS Statistics* (5th ed.). Thousand Oaks, CA: Sage. ISBN: 9781526436566

Supplemental readings will be given out during the course.

## Grades

### Grade Components

		Weights
Homework		60%
Exam		40%
Total		100%

### Grading Scale

Grade	Points
A	90.0 – 100%
B	80.0 – 89.9%
C	70.0 – 79.9%
F	0 – 69.9%

### Homework

Several graded homework projects will be assigned over the course of the semester. Unless otherwise instructed, each assignment must be developed and completed on your own, without the help of others (see UTEP's *Handbook of Operating Procedures* <https://www.utep.edu/student-affairs/osccr/student-conduct/academic-integrity.html>). The purpose of each assignment is to reinforce the application of statistical concepts from the textbook and class. Each assignment is usually due the week after it is assigned.

## Exams

There will be one take-home exam at the end of the semester. It will generally mimic the style of a comps question. It may focus on a single concept or ask you to integrate several analysis techniques covered in class.

## Course Policies

### Course Accessibility

Students with disabilities that may impact their learning or performance in this course are strongly encouraged to notify the instructor and contact the Center for Accommodations and Support Services (CASS) for assistance in ensuring special accommodations. CASS can be found in Union East 106; 915-747-5148; [cass@utep.edu](mailto:cass@utep.edu).

### Attendance and Participation

Attendance is critical to stay on top of material and homework assignments. Thus, students are expected to attend class regularly, but not required. Ultimately the responsibility for all material is the responsibility of the student.

### Late Work

Make-up exams and late work are generally not accepted. Exceptions will only be given at the discretion of the instructor for extenuating circumstances with adequate documentation and according to the policies outlined by the university.

## Academic Honesty

### Academic Integrity and Scholastic Dishonesty

Regarding academic integrity, this class abides by UTEP's *Handbook of Operating Procedures* and the Regents' *Rules and Regulations*. Please review the policies to learn your rights, obligations, and responsibilities at <https://www.utep.edu/student-affairs/osccr/student-conduct/academic-integrity.html>. Student performance should comply with the standards detailed within those documents.

### Plagiarism

Plagiarism is a direct violation of UTEP's *Handbook of Operating Procedures* and will not be tolerated. Every student is expected to do their own work and all of the work produced will be expected to be completed in its entirety by the students who turned it in. **Any acts of plagiarism will result in failing the course immediately** (regardless of how well or how poorly you are doing at the time). This is a zero-tolerance policy. There are no second chances. Any and all acts of scholastic dishonesty will be reported to the Office of Student Conduct and Conflict Resolution.

## Disclaimer

*The policies, procedures, schedule, assignments, and evaluation criteria in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or at the discretion of the instructor to ensure better student learning. It is your responsibility to become aware of any announced changes and to note any changes in the syllabus or course schedule.*

## Course Outline

Please note that the following schedule is subject to change. It is your responsibility to verify dates and assignments.

Week	Dates	Readings	General topics
1	August 28	Hair et al. Ch. 1-2	Introduction and Overview
	September 3	Labor Day Holiday	
2	September 4	Hair et al. Ch. 4	Simple Regression
3	September 11	Hair et al. Ch. 4	Multiple Regression
4	September 18		Mediation and Moderation
5	September 25		ANOVA and ANCOVA
6	October 2	Hair et al. Ch. 7	MANOVA
7	October 9	Hair et al. Ch. 5	Discriminant Analysis
8	October 16	Hair et al. Ch. 3 O'Rourke & Hatcher Ch. 2	Principal Components Exploratory Factor Analysis
9	October 23	Hair et al. Ch. 12 O'Rourke & Hatcher Ch. 4	Path Analysis
10	October 30	Hair et al. Ch. 13 O'Rourke & Hatcher Ch. 5	Confirmatory Factor Analysis
	November 2	Drop/Withdrawal deadline	
11	November 6	Hair et al. Ch. 14 O'Rourke & Hatcher Ch. 6	Structural Equation Modeling

12	November 13	Hair et al. Ch. 14 O'Rourke & Hatcher Ch. 6	Structural Equation Modeling
13	November 20		Longitudinal Data
	November 22-23	Thanksgiving Holiday	
14	November 27	Hair et al. Ch. 15	Special Topics: Multiple Group Models, Mediation/Moderation, Longitudinal Data, PLS
15	December 4	Hair et al. Ch. 15	Special Topics: Multiple Group Models, Mediation/Moderation, Longitudinal Data, PLS
	December 7	Dead Day	
	December 10		<b>Final Exam due</b>