



# Educational Research and Statistics

CEST 6300

New Orleans Baptist Theological Seminary

Division of Church Ministry

Online ~ Spring 2021

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## Mission Statement

New Orleans Baptist Theological Seminary and Leavell College prepare servants to walk with Christ, proclaim His truth, and fulfill His mission.

## Course Description

The course explores (1) the nature of science as a way of knowing, (2) the scientific method as a means of collecting credible empirical data regarding questions raised by educational ministries, and (3) statistical procedures as the means of analyzing collected data. The biblical basis for honest measures and analyses is found in passages such as “The Lord abhors dishonest scales, but accurate weights are his delight” (Pr 11:1, NIV. See also Lv 19:36; Dt 25:15; Pr 16:11, 20:23; Mi 6:11). Christian ministers can use quantitative methods to improve educational and administrative programs in the local church, taking “captive every thought to make it obedient to Christ” (2 Co 10:5-6, NIV). Through this course, students will construct an educational foundation for doctoral level research and analysis.

## Student Learning Outcomes

In order to serve local churches and denominational agencies effectively through Christian Education research, the students will demonstrate . . .

1. . . . understanding of the principles of research design, the structure of a formal research proposal, the various types of research, their corresponding approaches to data gathering, and the appropriate statistical procedure for each type by submitting clear and correct assignments and examinations.
2. . . . appreciation for credible data collection and sound statistical analysis by their willingness to give themselves to assignments, discussions, and exam preparation.
3. . . . skill in solving statistical problems by using statistical procedures in an appropriate and competent manner.

## Textbooks

Gravetter, Frederick J.; Larry B. Wallnau, *Statistics for The Behavioral Sciences* 10<sup>th</sup> edition.  
Boston: Cengage Publishers, ISBN: 978-1-305-50491-2.

Students will access the Gravetter textbook by means of Mindtap, an online learning platform. MindTap is designed to help you master the material. Interactive videos, animations, and activities create a learning path designed by your instructor to guide you through the course and focus on what's important. You will need to purchase your semester length access to Mindtap by following these instructions:

- Connect to <https://www.cengage.com/dashboard/#/course-confirmation/MTPQGL1QRBPM/initial-course-confirmation>
- Follow the prompts to register your MindTap course.
- After registering for your course, you will need to pay online using a credit or debit card, or PayPal.

IBM SPSS Statistics GradPack 26. This software may be downloaded as either a 6 month license or 12 month license at this url:

[https://estore.onthehub.com/WebStore/OfferingsOfMajorVersionList.aspx?pmv=304b1df-f-5b5d-e911-8115-000d3af41938&cmi\\_mnuMain=8659da1b-241d-e611-941a-b8ca3a5db7a1](https://estore.onthehub.com/WebStore/OfferingsOfMajorVersionList.aspx?pmv=304b1df-f-5b5d-e911-8115-000d3af41938&cmi_mnuMain=8659da1b-241d-e611-941a-b8ca3a5db7a1)

A calculator and access to Excel is optional, but helpful.

## Course Teaching Methodology

This course will emphasize a format of teaching and learning that leads to skill-based mastery of vocabulary, concepts, and procedures. This includes weekly reading assignments, writing assignments, lecture, demonstrations, problem-solving assignments, and conceptual examinations. The topics of study that will be covered in the course will include: an introduction to quantitative research and SPSS, descriptive statistics, statistical testing and probability, and inferential statistics (parametric and non-parametric).

Delivery Format: The course will be delivered on-line through Blackboard, as well as through Mindtap. See the course overview for weekly units.

## NOBTS Grading Scale Percentages

A 93-100%      B 85-92%      C 77-84%      D 70-76%      F 0-69%

## Course Grade Computation

The professor will prescribe a grade based upon the student's satisfactorily completion of the following:

<i>Homework Assignments</i>	<i>40%</i>	<i>Due each Saturday by midnight</i>
<i>Midterm Exam</i>	<i>30%</i>	<i>Due March 20 by midnight</i>

## Course Policies

The following policies will serve to govern both the student and professor for the duration of this course.

### Assignment Submission

Assignments will be made available to student access on Monday morning. Homework is due Saturday night before midnight. **Assignments not posted on time will be penalized 50%.**

### Netiquette

Appropriate Online Behavior. Each student is expected to demonstrate appropriate Christian behavior when working online on Discussion Boards or whenever interaction occurs through web, digital, or other electronic medium. The student is expected to interact with other students in a fashion that will promote learning and respect for the opinions of others in the course. A spirit of Christian charity is expected at all times in the online environment.

### Academic Honesty Policy

All graduate and undergraduate NOBTS students, whether on-campus, internet, or extension center students, are expected to adhere to the highest Christian standard of honesty and integrity when completing academic assignments for all courses in every delivery system format. The Bible provides our standard for academic integrity and honesty. This standard applies whether a student is taking tests, quizzes, exams, writing papers, completing Discussion Boards, or any other course requirement.

### **Technical Assistance**

For assistance regarding technology, consult ITC (504-816-8180) or the following websites:

1. [Selfserve@nobts.edu](mailto:Selfserve@nobts.edu) - Email for technical questions/support requests with the [Selfserve.nobts.edu](http://Selfserve.nobts.edu) site (Access to online registration, financial account, online transcript, etc.)
2. [BlackboardHelpDesk@nobts.edu](mailto:BlackboardHelpDesk@nobts.edu) - Email for technical questions/support requests with the NOBTS Blackboard Learning Management System [NOBTS.Blackboard.com](http://NOBTS.Blackboard.com).
3. [ITCSupport@nobts.edu](mailto:ITCSupport@nobts.edu) - Email for general technical questions/support requests.
4. [www.NOBTS.edu/itc/](http://www.NOBTS.edu/itc/) - General NOBTS technical help information is provided on this website.

### **Help for Writing Papers at “The Write Stuff”**

NOBTS maintains a Writing Center designed to improve English writing at the graduate level. Students can receive writing guides, tips, and valuable information to help in becoming a better writer.

### **Plagiarism on Written Assignments**

NOBTS has a no tolerance policy for plagiarism. Plagiarism in certain cases may result in expulsion from the seminary. See the NOBTS Student Handbook for definition, penalties, and policies associated with plagiarism.

**Course Schedule**  
(Spring 2021)

WEEK	TOPICS	ASSIGNMENTS
1	<b>Introduction to Research Design and Statistical Analysis</b>  <b>Overview of SPSS</b>	Read <b>chapter 1</b> , Gravetter. Download and Install SPSS Grad Pack Complete Homework Assignments on BB.
2	<b>Frequency Distributions</b>	View Posted Videos Read <b>chapter 2</b> Complete Homework Assignments on BB.
3	<b>Central Tendency</b>	View Posted Videos Read <b>chapter 3</b> Complete Homework Assignments on BB.
4	<b>Variability</b>	View Posted Videos Read <b>chapter 4</b> Complete Homework Assignments on BB.
5	<b>z-Scores</b>	View Posted Videos Read <b>chapter 5</b> Complete Homework Assignments on BB.
6	<b>Probability and Samples</b>	View Posted Videos Read <b>chapters 6-7</b> Complete Homework Assignments on BB.
7	<b>Hypothesis Testing and Student's t Test</b> Review Chapters 1-8 for midterm	View Posted Videos Read <b>chapters 8-9</b> Complete Homework Assignments on BB.
8	<b>t Test: Independent Samples and Related Samples</b>	View Posted Videos Read <b>chapters 10-11</b> Complete Homework Assignments on BB.  Post Midterm Exam ( <b>Due March 20</b> )
<b>Spring Break March 15-19, 2021</b>		
9	<b>ANOVA</b>	View Posted Videos Read <b>chapter 12</b> Complete Homework Assignments on BB.

10	<b>Repeated Measures ANOVA</b>	View Posted Videos Read <b>chapter 13</b> Complete Homework Assignments on BB.
11	<b>Factorial ANOVA</b>	View Posted Videos Read <b>chapter 14</b> Complete Homework Assignments on BB.
12	<b>Correlation</b>	View Posted Videos Read <b>chapter 15</b> Complete Homework Assignments on BB.
13	<b>Regression</b>	View Posted Videos Read <b>chapter 16</b> Complete Homework Assignments on BB.
14	<b>Chi-Square Tests Nonparametric Tests</b>	View Posted Videos Read <b>chapter 17</b> Complete Homework Assignments on BB.
15		Comprehensive Final Exam Due

\*The professor reserves the right to make changes to the schedule as needed.

### Selected Bibliography

Creswell, John W. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 4<sup>th</sup> ed. Los Angeles: Sage Publications, Inc. 2014.

Houser, Rick A. *Counseling and Educational Research: Evaluation and Application*, 3<sup>rd</sup> ed. Los Angeles: Sage Publications, Inc. 2015.

Johnson, R. Burke and Larry Christensen. *Educational Research: Quantitative, Qualitative, and Mixed Approaches*, 5<sup>th</sup> ed. Thousand Oaks, California: SAGE Publications, Inc. 2014.

Pelham, Brett W. *Intermediate Statistics: A Conceptual Course*. Thousand Oaks, California: SAGE Publications, Inc. 2013.

Salkind, Neil J. and Bruce B. Frey. *Statistics for People Who (Think They) Hate Statistics*. Seventh Ed. Los Angeles: Sage Publications, 2019. ISBN: 9781544381855

Salkind, Neil J. and Bruce B. Frey. *Study Guide for Education to Accompany Salkind and Frey's Statistics for People Who (Think They) Hate Statistics*. Seventh Ed. Los Angeles: Sage Publications, 2019. ISBN: 9781544395975