THE UNIVERSITY OF TEXAS
STEVE HICKS SCHOOL OF SOCIAL WORK

Course Number:	SW 388	**Instructor:**	Yessenia Castro, PhD
Unique Number:	59970	**Email:**	ycastro@austin.utexas.edu
Semester:	Spring 2021	**Office:**	SSW 3.130E
Meeting Time/Place:	Wednesdays	**Office Phone:**	512-232-0778
	2:30pm – 5:30pm SW 2.130	**Office Hours:**	By appointment

QUANTITATIVE DATA ANALYSIS II

I. STANDARDIZED COURSE DESCRIPTION

This course is designed to build upon the concepts and procedures introduced in Quantitative Data Analysis I, and enable students to do a more thorough job of data analysis by introducing multivariate statistical procedures into their repertoire of statistical techniques. It provides students with extended practice in the conceptual and mathematical bases of linear and logistic regression models, as well as extended practice in data preparation and organization. It also introduces students to advanced regression-based data analytic techniques, including moderation and mediation. The primary focus is on using the SPSS statistical package for estimating multivariate statistical models, and on the interpretation and write up of statistical analysis for research papers.

II. STANDARDIZED COURSE OBJECTIVES

By the end of this course, student should be able to:

1. Understand the conceptual and mathematical basis of statistical control and regression models.
2. Understand and be able to explain and apply the concept of statistical inference.
3. Conduct a variety of statistical analyses, including testing of statistical assumptions, linear and logistic regression, mediation, and moderation.
4. Design a data analytic strategy that answers a research question (including data preparation and organization), requirements of the statistic, and limitations to the interpretation.
5. Interpret and present (written and orally) the results of statistical analyses.

III. TEACHING METHODS

A variety of methods will be used to achieve course objectives in order be inclusive of diverse learning styles. These include readings, lectures, student-led group discussion, computer demonstrations, lab exercises, small homework assignments, and writing assignments. Students are expected to ask questions, share experiences, and actively participate in class discussions.

Most weeks, students will be assigned readings and be provided with datasets and other materials as needed in order to complete data analytic exercises in class each week. All materials will be organized by week in the Modules tab in the course's Canvas website. Students are expected to have completed assigned readings *before the class day for which they are assigned*. Lab exercises are expected to be started and completed in class. Some exception may be made to complete lab assignments prior to the next class day.

IV. REQUIRED TEXTS AND MATERIALS

***Required Texts**

1. Darlington, R. B. & Hayes, A. F. (2017). *Regression Analysis and Linear Models: Concepts, Applications, and Implementation.* New York; The Guilford Press.

    i. E-version available through UT Libraries: https://ebookcentral-proquest-com.ezproxy.lib.utexas.edu:2444/lib/utxa/reader.action?docID=4652287

2. Hayes, A. F. (2017). *Using SPSS: A little syntax guide.*

    i. Available on at: http://afhayes.com/using-spss-a-little-syntax-guide.html
    ii. Available on the Canvas course website.

3. *IBM SPSS Command Syntax Reference*

    i. Available in the SPSS software program.
        a. Open SPSS
        b. Click "Help"
        c. Click "Command Syntax Reference"

    ii. Available at the IBM SPSS Documentation website: https://www.ibm.com/support/knowledgecenter/SSLVMB_26.0.0/statistics_kc_ddita/spss/product_landing.html
        a. Click "Table of Contents"
        b. Click "Command Syntax Reference"

*Additional required readings are available on Canvas.

Required Materials and Software

1. Computer
2. Basic Calculator (such as the one available on most smartphones)
3. Reliable supply of note paper, pencils and erasers
4. Microsoft Excel
5. Microsoft Word
6. IBM SPSS Version 25 or higher

V. COURSE REQUIREMENTS

Student-led Group Discussion

Most days will begin with a student-led discussion of the module topic. The student-led group discussion has two goals. The first goal is to review the module's readings and get any outstanding questions or points of clarification answered by fellow classmates and the instructor. The second goal is to decide, as a class, what are the key conceptual, theoretical, or practical "take home points" from the module's readings. To this end, the following discussion prompts are offered. Students are encouraged to consider any other/additional exercises, strategies, or discussion points in pursuit of the above-stated goals as they see fit.

a. Articulate the "big picture"/ overall module topic.
b. Review (e.g., define, explain) individual concepts, terms, etc., as they come up in discussion, *in their own words.* This helps check one's own understanding.
c. Ask clarifying questions and make any "stuck points" known. This helps everyone learn and can lead to new insights.
d. Consider the connections of concepts from the current module with concepts from previous modules.
e. Think critically about the practical utility concepts, however abstract they may seem.
f. Think critically about any ethical questions or considerations that may arise for a particular concept.
g. Offer any important implications for the interpretation data, any applied examples, or other points that demonstrate problem-solving/critical thinking.

All students are expected to meaningfully contribute to the group discussion. Refraining to from participating in the group discussion will result in loss of attendance/participation points.

Exercises

Within each module, a significant amount of class time will be devoted to hand calculations and data analytic exercises. Students will be provided with the necessary materials to complete these exercises via Canvas, and should download those materials prior to logging into class. Given the inevitable need to provide improvised data analytic instruction "on the fly," students should be prepared to show their work to the instructor (and by extension, to the class) at any point during a given class.

Unless explicitly instructed otherwise, **students are expected to consult each other**, as well as the instructor, when engaging in any exercise. The instructor encourages students to complete exercises collaboratively in order to benefit from diverse understandings of the material. At the same time, it is important that each student complete the exercises at a pace that ensures they have an adequate familiarity and understanding of the process. Thus, depending on the pace of the class, some exercises that are started in class may be completed before the end of class, or a one-day extension may be granted. In addition, some exercises are designed to be completed as homework assignments, and these will be due on the

following Tuesday (i.e., the day before the next class). **All exercises should be uploaded to Canvas by 11:59 pm on the day they are due unless explicitly stated otherwise by the instructor.**

Exams

Students will complete a Mid-term Exam covering the first 4 modules and a Final Exam covering the second 4 modules (students will not be tested on Module 9). These are take-home, open book exams. Students are encouraged to utilize all resources provided in the course and are free to utilize any additional resources they may find independently. In addition, students are encouraged to share resources with each other. However, **students are expected to complete exams independently.** Students will receive each exam 2 weeks before it is due. Exams and all supporting materials should be uploaded to Canvas by 11:59 pm on their noted due dates.

Students will earn 2 points each week (15 classes; 30 points total) provided participation criteria (outlined below) are fulfilled at each class. **Participation points are awarded on an all-or-nothing basis.** Students will complete 12 exercises ranging from 5 to 10 points each (70 points total). Each of the two exams will be worth 25 points (50 points total). Thus, students' grades will be based on the percentage of points earned out of 150. The grading scale for this course is as follows:

VI. GRADES

94.0 and Above	A
90.0 to 93.999	A-
87.0 to 89.999	B+
84.0 to 86.999	B
80.0 to 83.999	B-
77.0 to 79.999	C+
74.0 to 76.999	C
70.0 to 73.999	C-
67.0 to 69.999	D+
64.0 to 66.999	D
60.0 to 63.999	D-
Below 60.0	F

VII. CLASS POLICIES

Assignment Submission

All assignments should be submitted through their designated link on the "Assignments" tab on the Canvas course website. Only assignments submitted via Canvas will be accepted. ***Assignments submitted to Dr. Castro via email without her explicit prior permission will not be accepted.*** Please plan accordingly.

Late Assignments

No late assignments will be accepted except in the circumstance of a ***documented, unforeseen emergency that has occurred on the day the assignment due <u>and</u> has caused the student to miss the assignment deadline.*** In this case, the student should be prepared to approach Dr. Castro with official documentation of the unforeseen emergency. If a student is aware of any other situation that will cause them to be unable to turn in an assignment on its due date, they should plan to submit the it early and notify Dr. Castro of their intent to do so.

Attendance

Class will start promptly at 2:30 pm. Students are expected to attend class on time. Student arrivals. Students are expected to be prepared for each class (i.e., completed the week's readings, have information to contribute to the review/discussion and questions to ask the class, and downloaded the necessary materials for the day's class from Canvas).

If a student cannot attend a class, they should notify Dr. Castro ahead of time. Students should notify Dr. Castro as soon as possible after a *documented, unforeseen emergency* that has caused them to miss class with no prior notice. If a student has a documented, unforeseen emergency that affects their attendance in this course, they should be prepared to approach Dr. Castro about it with official documentation of the unforeseen emergency. In the case of an absence due to a documented and unforeseen emergency, Dr. Castro will assist the student in getting caught up with the missed class.

Participation

All students are expected to meaningfully contribute to every class. Participation is evaluated based on the extent to which the student makes one or more meaningful contributions in during the class period. In this course, a *<u>meaningful contribution</u>* is defined as a substantive commentary that helps move the group discussion forward beyond a basic review/reiteration of concepts. Examples of meaningful contributions include (but are not limited to) points d through g in the section "Student-led Group Discussion" above. Additionally, helping another student or the class advance their understanding of a concept with which they are struggling (or otherwise helping them get past a stuck point) constitutes a meaningful contribution.

Electronic Devices in the Classroom

The use of other electronic devices during class is prohibited. *Students misusing laptops or smartphones, or using other electronic devices during class will be dismissed from class.* Students must turn mobile phones to silent and disable notifications when they log into class **Phones must be completely silent. Placing phones on vibrate is not acceptable.**

Use of the Canvas Web Site

Web-based, password-protected class sites using Canvas software are available for all accredited courses taught at The University of Texas. Syllabi, handouts, assignments and other resources are types of information that may be available within these sites. Site activities could include exchanging email, engaging in class discussions and chats, and exchanging files. In addition, class e-mail rosters will be a component of the sites. Students who do not want their names included in these electronic class rosters must restrict their directory information in the Office of the Registrar, Main Building, Room 1. For information on restricting directory information see: http://www.utexas.edu/student/registrar/catalogs/gi00-01/app/appc09.html.

This class will utilize Canvas for organization and distribution of all course materials and recording of student grades. The link to the course's virtual classroom will only be posted on Canvas.

Canvas will also be used by Dr. Castro to communicate with students via email. Students should make a concerted effort to check their email at least once per day for any announcements from Dr. Castro regarding this course. The primary mode of communication for this course will be email via the Canvas course website. Note below (in University Policies) that email is an official form of communication for The University of Texas at Austin and students are strongly encouraged to check their email daily.

VIII. UNIVERSITY POLICIES

COVID-19 RELATED INFORMATION. The University's policies and practices related to the pandemic may be accessed at: https://protect.utexas.edu/

THE UNIVERSITY OF TEXAS HONOR CODE. The core values of The University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility. Each member of the university is expected to uphold these values through integrity, honesty, trust, fairness, and respect toward peers and community.

DOCUMENTED DISABILITY STATEMENT. Any student who requires special accommodations must obtain a letter that documents the disability from the Services for Students with Disabilities area of the Division of Diversity and Community Engagement (471- 6259 voice or 471-4641 TTY for users who are deaf or hard of hearing). A student should present the letter to the professor at the beginning of the semester so that needed accommodations can be discussed and followed. The student should remind the professor of any testing accommodations no later than five business days before an exam. For more information, visit: http://diversity.utexas.edu/disability/.

PROFESSIONAL CONDUCT AND CIVILITY IN THE CLASSROOM. The professor expects students to act as professionals in class. This means students should arrive on time for class, be prepared to participate in the class discussion, and show respect for one another's opinions. A course brings together a group of diverse individuals with various backgrounds. Students are influenced and shaped by such factors as race, ethnicity, gender, sex, physical

abilities, religious and political beliefs, national origins, and sexual orientations, among others. We expect to learn from each other in an atmosphere of positive engagement and mutual respect. This atmosphere includes working intentionally to recognize and dismantle racism, sexism, heterosexism, and ableism in the classroom. Social Work also deals with complex and controversial issues. These issues may be challenging and uncomfortable, and it would be impossible to offer a substantive classroom experience that did not include potentially difficult conversations relating to challenging issues. In this environment, we will be exposed to diverse ideas and opinions, and sometimes we will not agree with the ideas expressed by others. Nevertheless, the professor requires that students engage one another with civility, respect, and professionalism.

UNANTICIPATED DISTRESS. Students may experience unexpected and/or distressing reactions to course readings, videos, conversations, and assignments. If so, students are encouraged to inform the professor. The professor can be responsive and supportive regarding students' participation in course assignments and activities, but students are responsible for communicating clearly what kind of support is desired. If counseling is needed, students may contact a service provider of their choosing, including the UT Counseling Center at 512-471-3515 or online at https://cmhc.utexas.edu/.

POLICY ON SOCIAL MEDIA AND PROFESSIONAL COMMUNICATION. Public social networks are not private. Even when open only to approved or invited members, users cannot be certain that privacy will exist among the general membership of sites. If social work students choose to participate in such forums, please assume that anything posted can be seen, read, and critiqued. What is said, posted, linked to, commented on, uploaded, subscribed to, etc., can be accessed and archived, posing potential harm to professional reputations and prospective careers.

Social work students who use social media (e.g., Facebook, Twitter, Instagram) and other forms of electronic communication (e.g., blogs) must be mindful of how their communication may be perceived by clients, colleagues, faculty, and others. Social work students are expected to make every effort to minimize material which could be considered inappropriate for a professional social worker in training. Because of this, social work students are advised to manage security settings at their most private levels and avoid posting information/photos or using any language that could jeopardize their professional image.

Students are asked to consider the amount of personal information posted on these sites and are obliged to block any client access to involvement in the students' social networks. Client material should not be referred to in any form of electronic media, including *any* information that might lead to the identification of a client or compromise client confidentiality in *any* way. Additionally, students must critically evaluate any material that is posted regarding community agencies and professional relationships, as certain material could violate the standards set by the School of Social Work, the Texas Code of Conduct for Social Workers, and/or the NASW Code of Ethics.

Social work students should consider that they will be representing professional social work practice as well as The University of Texas at Austin School of Social Work program while in the classroom, the university community, and the broader area communities.

POLICY ON ACADEMIC INTEGRITY. Students who violate University rules on academic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and / or dismissal from the University. Since such dishonesty harms the individual, all students, and the integrity of the University, policies on academic dishonesty will be strictly enforced. For further information, please visit the Student Conduct and Academic Integrity website at: http://deanofstudents.utexas.edu/conduct.

USE OF COURSE MATERIALS. The materials used in this course, including, but not limited to exams, quizzes, and homework assignments, are copyright protected works. Any unauthorized duplication of the course materials is a violation of federal law and may result in disciplinary action being taken against the student. Additionally, the sharing of course materials without the specific, express approval of the professor may be a violation of the University's Student Honor Code and an act of academic dishonesty, which could result in further disciplinary action. This sharing includes, among other things, uploading class materials to websites for the purpose of distributing those materials to other current or future students.

CLASSROOM CONFIDENTIALITY. Information shared in class about agencies, clients, and personal matters is considered confidential per the NASW Code of Ethics on educational supervision and is protected by regulations of the Family Educational Rights and Privacy Act (FERPA) as well. As such, sharing this information with individuals outside of the educational context is not permitted. Violations of confidentiality could result in actions taken according to the policies and procedure for review of academic performance located in sections 3.0, 3.1, and 3.2 of the Standards for Social Work Education.

UNIVERSITY ELECTRONIC MAIL STUDENT NOTIFICATION. Electronic mail (email), like postal mail, is a mechanism for official University communication to students. The University will exercise the right to send email communications to all students, and the University will expect that email communications will be received and read in a timely manner. Students can find UT Austin's policies and instructions for updating their e-mail address at https://it.utexas.edu/policies/university-electronic-mail-student-notification-policy.

RELIGIOUS HOLY DAYS. A student who misses classes or other required activities, including examinations, for the observance of a religious holy day should inform the instructor as far in advance of the absence as possible so that arrangements can be made to complete an assignment within a reasonable period after the absence. A reasonable accommodation does not include substantial modification to academic standards, or adjustments of requirements essential to any program of instruction. Students and instructors who have questions or concerns about academic accommodations for religious observance or religious beliefs may contact the Office for Inclusion and Equity. The University does not maintain a list of religious holy days.

TITLE IX REPORTING. In accordance with Title IX of the Education Amendments of 1972, the University of Texas at Austin is committed to maintaining a learning environment that is free from discriminatory conduct on the basis of sex https://titleix.utexas.edu/. Faculty, field instructors, staff, and/or teaching assistants in their supervisory roles are mandated reporters of incidents of sex discrimination, sexual harassment, sexual violence, stalking, dating violence, or

any other forms of sexual misconduct. Students who report such incidents will be informed of University resources. Incidents will be reported to the University's Title IX Coordinator. Further information, including student resources related to Title IX, may also be found at https://titleix.utexas.edu/.

CAMPUS CARRY POLICY. The University's policy on campus carry may be found here: https://campuscarry.utexas.edu.

SAFETY. As part of professional social work education, students may have assignments that involve working in agency settings and/or the community. As such, these assignments may present some risks. Sound choices and caution may lower risks inherent to the profession. It is the student's responsibility to be aware of and adhere to policies and practices related to agency and/or community safety. Students should notify the professor regarding any safety concerns.

BEHAVIOR CONCERNS and COVID-19 ADVICE LINE (BCCAL). If students have concerns about their behavioral health, or if they are concerned about the behavioral health of someone else, students may use the Behavior Concerns and COVID-19 Advice Line to discuss by phone their concerns. This service is provided through a partnership between the Office of the Dean of Students, the Counseling and Mental Health Center (CMHC), the Employee Assistance Program (EAP), and The University of Texas Police Department (UTPD). Call 512-232-5050 or visit https://safety.utexas.edu/behavior-concerns-advice-line. The Behavior Concerns and COVID-19 Advice Line has been expanded to support The University of Texas at Austin community during the COVID-19 pandemic. By calling 512-232-5050 - Option 2 for COVID-19, students, faculty and staff can be assisted in English and Spanish with COVID-19 support.

EMERGENCY EVACUATION POLICY. Occupants of buildings on the UT Austin campus are required to evacuate and assemble outside when a fire alarm is activated or an announcement is made. Please be aware of the following policies regarding evacuation:

- Familiarize yourself with all exit doors in the classroom and the building. Remember that the nearest exit door may not be the one you used when entering the building.
- If you require assistance to evacuate, inform the professor in writing during the first week of class.
- In the event of an evacuation, follow the professor's instructions.
- Do not re-enter a building unless you are given instructions by the Austin Fire Department, the UT Austin Police Department, or the Fire Prevention Services office.

IX. COURSE SCHEDULE

The course is divided into eight topic modules to be covered over the 15-class semester. Modules have been historically covered in 1 to 2 days (depending on the topic). The course calendar is designed to allow for flexibility in the length of time spent on up to 3 topics as deemed necessary by the class. Historically, this has *always* been deemed necessary to some extent. Should extra time not be necessary, additional topics can be covered.

Module	Topic	Assignments Due	Readings Due
1	Introduction to SPSS with syntax	Exercise 1 Basic Data Preparation	Hayes (2017) Kent State University, SPSS Tutorial, Section 1: https://libguides.library.kent.edu/SPSS/home
2	Measures of Central Tendency, Dispersion, and Distribution	Exercise 2 Calculating Central Tendency, Dispersion, and Distribution	Dashpande et al., (2016) Kim (2013) Lamb (2008) Kent State University SPSS Tutorials, Section 3: https://libguides.library.kent.edu/SPSS/home
3	Covariance and Correlation	Exercise 3 Calculating Covariance and Pearson's r	1) Gogtay & Thatte (2017) Aggarwal & Ranganathan (2016)
4	Principles of Regression Analysis	Exercise 4 Linear Equation Worksheets Exercise 5 Calculating Components of Y	Complete in the following order: 2) Brennan (2002) Understanding Algebra. Chapter 4: Graphing and Straight Lines. http://www.jamesbrennan.org/algebra/index.html 3) Linear Equation Worksheets (Exercise 4) a) Finding Slope b) Writing equations c) Graphing Equations 4) Gogtay, Deshpande, & Thatte (2017)

5	Simple (aka: Univariate, Univariable) Linear Regression	Exercise 6 Calculating a Simple Linear Regression Exercise 7 Running and Interpreting a Simple Linear Regression Exercise 8 Running and Interpreting a Simple Linear Regression (Again)	Darlington & Hayes, Ch 1 and 2
6	Null Hypothesis Testing and Statistical Inference		Hayat (2010) Darlington & Hayes, Chapter 4
7	Multiple (aka: Multivariate, Multivariable) Linear Regression	Exercise 9 Calculating a Multiple Linear Regression Exercise 10 Running and Interpreting a Multiple Linear Regression	Darlington & Hayes, Ch 3, Sec 3.1 and 3.2. Darlington & Hayes, Ch 9 Darlington & Hayes, Ch 16
8	Logistic Regression	Exercise 11 Measures of Relative Differences Worksheets Exercise 12 Running and Interpreting a Logistic Regression	<u>Complete in this order</u> 1) Dr. Castro's slides on measures of relative difference. 2) Calculating relative differences worksheet 3) Interpreting odds ratios worksheet 4) Peng, Lee, & Ingersoll (2002) Darlington and Hayes, Ch18
9	Introduction to Statistical Moderation Analysis		Darlington & Hayes, Ch 13 and 14 TBD

Important Dates

January 19, 2022: First Day of Class
March 9, 2022: Exam 1 Due
March 16, 2022: Spring Break, No Class
May 4, 2022: Exam 2 Due and last day of class

X. BIBLIOGRAPHY

Publications

1. Aggarwal, R., & Ranganathan, P. (2016). Common pitfalls in statistical analysis: The use of correlation techniques. *Perspectives in Clinical Research, 7*(4), 187–190.
2. American Psychological Association (2009). *Publication Manual of the American Psychological Association, 6th edition.* Washington, DC; American Psychological Association.
3. Biau, D. J., Jolles, B. M., & Porcher, R. (2010). P value and the theory of hypothesis testing: an explanation for new researchers. *Clinical Orthopaedics and Related Research, 468*(3), 885-892.
4. Cohen, J. (1994). The earth is round ($p < .05$). *American Psychologist,* 49, 997-1003.
5. Cortina, J. M., & Dunlap, W. P. (1997). On the logic and purpose of significance testing. *Psychological Methods, 2*(2), 161-172.
6. Darlington, R. B. & Hayes, A. F. (2017). *Regression Analysis and Linear Models: Concepts, Applications, and Implementation.* New York; The Guilford Press.
7. Deshpande, S., Gogtay, N. J., & Thatte, U. M. (2016). Measures of central tendency and dispersion. *Journal of the Association of Physicians of India, 64,* 64-66.
8. Gelman, A., & Loken, E. (2014). The statistical crisis in science, *American Scientist, 102.* Available at http://www.americanscientist.org/issues/feature/2014/6/the-statistical-crisis-in-science.
9. Gogtay, N. J., Deshpande, S. P., & Thatte, U. M. (2017). Principles of regression analysis. *Journal of the Association of Physicians of India, 65,* 48-52.
10. Gogtay, N. J., & Thatte, U. M. (2017). Principles of correlation analysis. *Journal of the Association of Physicians of India, 65*, 78-81.
11. Hayat, M. J. (2010). Understanding statistical significance. *Nursing Research, 59,* 219-223.
12. Hayes, A. F. (2017). *Using SPSS: A little syntax guide.* Available at: http://afhayes.com/using-spss-a-little-syntax-guide.html

13. Hayes, A. F., & Montoya, A. K. (2017). A tutorial on testing, visualizing, and probing an interaction involving a multicategorical variable in linear regression analysis. *Communication Methods and Measures*, *11*(1), 1-30.
14. Hosmer Jr, D. W., Lemeshow, S., & Sturdivant, R. X. (2013). *Applied Logistic Regression* 3rd Edition. John Wiley & Sons.
15. Kim, H. Y. (2013). Statistical notes for clinical researchers: assessing normal distribution (2) using skewness and kurtosis. *Restorative Dentistry & Endodontics, 38*(1), 52-54.
16. Lamb, C. R. (2008). Statistical briefing: the normal distribution. *Veterinary Radiology & Ultrasound, 49*(5), 492-493.
17. MacKinnon, D. P., Krull, J. L., & Lockwood, C. M. (2000). Equivalence of the mediation, confounding and suppression effect. *Prevention Science*, *1*(4), 173-181.
18. Peng, Lee, & Ingersoll (2002). An Introduction to Logistic Regression Analysis and Reporting. *The Journal of Educational Research, 96*(1), 1-13.
19. Vardeman, S. B., & Max D Morris, M. D. (2003) Statistics and Ethics, *The American Statistician, 57*(1), 21-26.
20. Wasserstein, R. L. (2016) The ASA Statement on p-Values. *The American Statistician, 70*(2) 131-133.

Instructional Websites

1. UT Austin SDS software tutorials: https://stat.utexas.edu/training/software-tutorials
2. UCLA Institute for Digital Research and Education Website: http://www.ats.ucla.edu/stat/
3. Kent State University, SPSS Tutorial: https://libguides.library.kent.edu/SPSS/home

Youtube Channels

1. Research by Design (SPSS tutorials)
2. Quantitative Specialists (SPSS tutorials)
3. Brandon Foltz (statistics tutorials)
4. James Gaskin (statistics tutorials in SPSS and Mplus)

Consulting

1. UT Austin SDS statistical consulting: https://stat.utexas.edu/consulting/free-consulting