University of Texas at Arlington

School of Social Work

SOCW 6341: Advanced Statistical Methods in Human Services

Spring 2017

Instructors: Dr. Ling Xu

Office Number: A101E

Office Telephone Number: School of Social Work main number: 817.272.3181

Email Address: lingxu@uta.edu

Faculty Profile: https://www.uta.edu/profiles/ling-xu

Office Hours: Tuesdays, 11:00am-12:00pm, and by appointment

Section Information: SOCW 6341-Advanced Statistical Methods in Human Services

Time and Place of Class Meetings: Social Work Building A, Room 114

Description of Course Content:

Advanced statistical applications in the human services. Emphasis on multivariate statistical approaches including multiple regression analysis, logistic regression, and advanced general linear modeling approaches to analyzing data from social work research.

Student Learning Outcomes:

1. To increase the student's understanding of the role of research and advanced statistics in social work practice, theory construction, and policy formation

2. To increase the student's ability to interpret, utilize and analyze advanced statistical outcomes presented in empirical studies in social science
3. To increase the ability of students to match appropriate advanced statistical procedures to type of data, and research questions
4. To increase the student's ability to perform advanced statistical analyses using SPSS software
5. To increase the ability of students to interpret research outcomes based on their statistical results

Required Textbooks and Other Course Materials:

Required:
- Abu-Bader, S. H. (2010). *Advanced & multivariate statistical methods for social science*. Chicago: Lyceum Books Inc.
- Field, A. (2013). *Discovering statistics using IBM SPSS statistics* (4th Edition). SAGE Publications Ltd.
- Long, J. S. (1997). *Regression models for categorical and limited dependent variables*. Thousand Oaks, CA: Sage.

Suggested additional materials:
- Randolph, K. A., & Myers, L. L. (2013). *Basic statistics in multivariate analysis*. New York: Oxford University Press.
- Orme, J. G., & Combs-Orme, T. (2009). *Multiple regression with discrete dependent variables*. New York: Oxford University Press.
- Dattalo, P. (2013). *Analysis of multiple dependent variables*. New York: Oxford University Press.

Descriptions of major assignments and examinations:

The major assignments in the course consist of weekly homework projects, mid-term exam, one paper presentation, one abstract submission of an abstract to Society of Social Work Research (SSWR) conference, and one final paper draft.

Weekly Homework Projects: will be assigned at the end of each class and are due by Sunday at midnight for each week they are assigned. Homework assignments will be available on Blackboard. Students will be responsible for downloading the assignments from Blackboard each week. Students will submit the assignments via Blackboard as a Word or SPSS document. Written copies of homework assignments will not be accepted, and no credit will be given for late assignments. Weekly assignments are 3 points each.

Mid-term Exam: will be administered online the week before Spring Break. Students will complete the exam remotely at preferred locations, but you should ensure that you have access to a robust computer with a reliable and high-speed Internet connection. If you cannot ensure such access, the instructor will provide access.

Paper presentation: each student will pick up one paper to present that is relevant to the topic learned last week. The presentation should last for 10-15 minutes.

Abstract to SSWR: Submit abstract of final paper to SSWR before April 30th, 2017.

Final paper: Students are expected to complete a term paper with maximum 25 pages that is of god quality to submit to an academic journal. Students are required to apply one or more of the techniques taught in class to data analysis of a problem of interest to the student.

Attendance:

At The University of Texas at Arlington, taking attendance is not required. Rather, each faculty member is free to develop his or her own methods of evaluating students' academic performance, which includes establishing course-specific policies on attendance. As the instructors of this section, I acknowledge that your attendance and participation are essential. Although the expectation for Ph.D. level study is perfect attendance, any student who misses more than (3) scheduled classes will receive an "F" in the class. In the event of extenuating circumstances, please notify me ahead of time, to the degree that it is possible.

Grading:

The grade in this course will be determined through weekly assignments, mid-term exam, paper presentation, abstract submission and a final paper submission:

Weekly assignments: 30%
Midterm exam: 20%
Paper presentation: 10%
Abstract submission: 10%
Final project submission: 30%

Grading Scale:
90% – 100% = A
80% – 89% = B
70% – 79% = C
60% – 69%= D
< 60% = F

Course Schedule:

Week	Date	Topic	Readings	Weekly Assignments
1	1., 17	Introduction to the Course, Review and Introduction to Multiple regression	Abu-Bader--Ch. 4; Field--Ch. 8; Long--Ch. 2	Select your own dataset using ICPSR, also provide rational of why you think this dataset is relevant or interested to your research.
2	Jan., 24	Multiple Regression--Assumptions, Dummy variables	Abu-Bader--Ch. 4; Field--Ch.8; Long--Ch. 2	Propose a research question using multiple regression, checking assumptions and run analyses
3	Jan., 31	Multiple Regression--Moderation	Field--Ch.10 and Handout	Propose a research question using interaction/moderation terms in multiple regression, run analysis
4	Feb., 7	Multiple Regression--Mediation	Field--Ch.10 and Handout	Propose a research question using mediation terms in multiple regression, run analysis
5	Feb., 14	Introduction to Logistic Regression	Abu-Bader--Ch. 5; Long--Ch. 3	
6	Feb., 21	Logistic Regression (for binary DV)	Abu-Bader--Ch. 5; Long--Ch.3-4; Field--Ch.19	Propose a research question using binary outcome variable, run logistic regression analysis
7	Feb., 28	Review (individual meetings upon request)	-	-
8	Mar., 7	Mid-term Exam	-	-
9	Mar., 14	Spring Break	-	-
10	Mar., 21	Logistic Regression (for nominal DV)	Long--Ch.6	Propose a research question using nominal outcome variable, run multinomial logistic regression analysis
11	Mar., 28	Logistic Regression (for count DV)	Long--Ch.8	Propose a research question using count outcome variable, run Poisson or Negative Binomial logistic regression analysis
12	Apr., 4	Logistic Regression (for ordinal DV)	Long--Ch.5	Propose a research question using ordinal outcome variable, run ordinal logistic regression analysis

13	Apr., 11	Hierarchical Linear Modeling (HLM)	Field--Ch. 20 and Handout	
14	Apr., 18	Exploratory Factor Analyses	Abu-Bader--Ch. 5; Field--Ch.17	Choose a scale and run exploratory factor analysis
15	Apr., 25	Confirmatory Factor Analyses	Abu-Bader--Ch. 5	Choose a scale and run confirmatory factor analysis
16	2-May	Draft final paper (individual meetings upon request)	-	Final paper
17	9-May	Draft final paper (individual meetings upon request)	-	Final paper

* As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course.

Drop Policy:

Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance**. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (http://wweb.uta.edu/aao/fao/).

Americans with Disabilities Act:

The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the *Americans with Disabilities Act (ADA)*. All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability or by calling the Office for Students with Disabilities at (817) 272-3364.

Non-Discrimination Policy:

The University of Texas at Arlington does not discriminate on the basis
of race, color, national origin, religion, age, gender, sexual orientation, disabilities, genetic
information, and/or veteran status in its educational programs or activities it operates. For more
information, visit uta.edu/eos.

Title IX:

The University of Texas at Arlington is committed to upholding U.S. Federal Law "Title IX" such that no member of the UT Arlington community shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity. For more information, visit www.uta.edu/titleIX.

Academic Integrity:

Students enrolled all UT Arlington courses are expected to adhere to the UT Arlington Honor Code:

> *I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.*
> *I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.*

UT Arlington faculty members may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents' Rule* 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University.

Electronic Communication:

UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and

are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at http://www.uta.edu/oit/cs/email/mavmail.php.

Campus Carry:

Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes as prohibited. Under the new law, openly carrying handguns is not allowed on college campuses. For more information, visit http://www.uta.edu/news/info/campuscarry/

Student Feedback Survey:

At the end of each term, students enrolled in classes categorized as "lecture," "seminar," or "laboratory" shall be directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit http://www.uta.edu/sfs.

Final Review Week:

A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week *unless specified in the class syllabus*. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

Emergency Exit Procedures:

Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit, which is located on the south side of this building directly outside the classroom. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist individuals with disabilities.

Student Support Services:

UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or view the information at www.uta.edu/resources.

Emergency Phone Numbers: In case of an on-campus emergency, call the UT Arlington Police Department at **817-272-3003** (non-campus phone), **2-3003** (campus phone). You may also dial 911.
For non-emergencies, contact the UTA PD at 817-272-3381.

Faculty members should feel free to incorporate any of the following information into your course syllabus or other course materials.
Library Home Page .... http://www.uta.edu/library
Subject Guides .... http://libguides.uta.edu
Subject Librarians .... http://www.uta.edu/library/help/subject-librarians.php
Database List .... http://www.uta.edu/library/databases/index.php
Course Reserves .... http://pulse.uta.edu/vwebv/enterCourseReserve.do
Library Tutorials .... http://www.uta.edu/library/help/tutorials.php
Connecting from Off- Campus .... http://libguides.uta.edu/offcampus
Ask A Librarian .... http://ask.uta.edu

The following URL houses a page where we have gathered many commonly used resources needed by students in online courses: http://www.uta.edu/library/services/distance.php.
The subject librarian for your area can work with you to build a customized course page to support your class if you wish. For examples, visit http://libguides.uta.edu/os and http://libguides.uta.edu/pols2311fm . If you have any questions, please feel free to contact Suzanne Beckett, at sbeckett@uta.edu or at 817.272.0923.