THE UNIVERSITY OF TEXAS
AT ARLINGTON
SCHOOL OF NURSING

N6390-056
Advanced Statistics for Health Professionals

SYLLABUS

Spring 2013
Classroom #: Pickard Hall 216

The University of Texas at Arlington School of Nursing
PhD Program

N6390-016 (3 credit Hours, 33 clock hours)
Spring 2013
Wednesdays 4:00 to 7:00pm
Pickard Hall, Room # 216

INSTRUCTOR:	Instructor: Daisha J. Cipher, Ph.D. Office Hours: Wednesdays 2-4pm, Center for Nursing Research Email: cipher@uta.edu Web Site: https://elearn.uta.edu/
COURSE WEB SITE OR WORLD WIDE WEB SITE:	All course handouts are available for download via Blackboard. https://elearn.uta.edu/webapps/login/
COURSE PREREQUISITES:	Graduate level introductory statistics course, proficiency in basic computer management, experience with any statistical software package
REQUIRED TEXTBOOKS & MATERIALS:	None – handouts are the primary reading material
RECOMMENDED TEXTBOOKS & MATERIALS:	1. Zar, J.H. (1999). *Biostatistical Analysis, 4th ed.* Upper Saddle River: Prentice-Hall. 2. Tabachnick, B.G., & Fidell, L.S. (2001). Using Multivariate Statistics, 4th ed. Needham Heights: Allyn and Bacon.
COURSE DESCRIPTION:	This course provides students with advanced knowledge and skills to effectively use biostatistics in different research design and data analysis. Topics include advanced statistical methods including ANOVA, ANCOVA, randomized block designs, simple repeated measures, factorial designs, nested designs, multiple regression, and multivariate analysis of variance. Students will become proficient in using a statistical software package to manipulate datasets and perform statistical analyses.
COURSE LEARNING GOALS/OUTCOME OBJECTIVES:	1. Conceptualize ANOVA, compute, summarize, and interpret tests of hypotheses for ANOVA. 2. Conceptualize simple repeated measures, compute, summarize, and interpret simple repeated measures ANOVA. 3. Conceptualize and distinguish between completely randomized designs, randomized block designs, repeated measures designs, and factorial designs 4. Compute, summarize, and interpret partial correlations. 5. Compute and interpret test of hypotheses for multiple linear regression; test interaction effects in regression 6. Conceptualize power analyses and sample size estimation 7. Conceptualize and apply effect sizes as they are involved in power analysis 8. Compute, summarize, and interpret multivariate analyses of variance

9. Use SPSS to analyze data using each of the statistical methods covered in this class.

ATTENDANCE AND DROP POLICY:

- Regular class attendance and participation is expected of all students.
- Students are responsible for all missed course information.

A PhD student who wishes to change a schedule by either dropping or adding a course must first consult with his or her PhD Advisor. The following regulations pertain to adds and drops:

1. A student may not add a course after the end of the late registration.
2. A PhD student dropping a course or resigning from the university after the Census Date but before the final designated drop date for the enrolled semester will receive a grade of W only if at the time of dropping the student is passing the course (has a grade of A, B, or C); if the student has a D or F at the time of dropping, an F will be recorded. Students dropping a course must: (1) Complete a Course Drop Form (available online http://www.uta.edu/nursing/g-downloads.htm or PhD Office Room 512; (2) obtain faculty signature and current course grade; and (3) Submit the form to PhD Office Room 512.
3. A PhD student who desires to drop all courses for which he or she is enrolled is reminded that such action constitutes a withdrawal from the University. The student should indicate intention to withdraw from all courses by: (1) Completing a Registration Form (available online http://www.uta.edu/nursing/g-downloads.htm or PhD Office Room 512; (2) Obtaining faculty signature for each course enrolled and current course grade; (3) Filing the registration form in the School of Nursing Office Room 512; and (4) Filing the Registration Form in the Office of the Registrar in Davis Hall Room 333.
4. PhD students may drop a course up to 12 weeks in the fall or spring semester and up to 8 weeks in a 10-week summer session. Under extreme circumstances, the Dean or Associate Dean of the PhD in Nursing Program may consider a petition to withdraw after the designated drop date, but in no case may a PhD student selectively drop a course after the drop date and remain enrolled in any other course.

Last Date Drop or Withdraw: - March 29, 2013

TENTATIVE LECTURE/TOPIC SCHEDULE (COURSE CONTENT):

Review of Introductory Statistics Handout 1	January 16
One Way Analysis of Variance Completely Randomized Design Randomized Complete Block Design Handouts 2 thru 5	January 23
Repeated Measures Designs Simple Repeated Measures ANOVA Handout 6	January 30 HW 1 due

Mixed Factorial ANOVA Handout 7	February 6 HW 2 due
Analysis of Covariance Handout 8	February 13 HW 3 due
Multivariate Analysis of Variance Introduction to Matrix Algebra Handouts 9, 10, 11	February 20 HW 4 due
Review for Midterm Exam	February 27 HW 5 and 6 due
MID-TERM EXAM	March 6
Spring Break; No Class	*March 13*
Power Analysis, Sample Size Estimation, and Effect Sizes Handouts 12 and 13	March 20
Power Analysis, Sample Size Estimation, and Effect Sizes, continued	March 27
Partial Correlation Multiple Linear Regression Handout 14	April 3 HW 7 due
Multiple Regression, continued Interaction Effects in Regression Handout 15	April 10 HW 8 due
Review for Final Exam	April 17 HW 9 due
FINAL EXAM	**April 24**

HOMEWORK ASSIGNMENTS:

Homework will be assigned regularly to help students apply the lecture topic. ALL HOMEWORK assignments will require both pen/pencil/calculator as well as a computer with a statistical software package called SPSS. SPSS is available in Pickard Hall 216 and is also available for purchase in the UTA bookstore. **Accompany all Homework Assignments with "Homework Summary Sheet" provided on the handout website**. To obtain an A on a homework assignment, all sections are required, and the homework summary must be correct. If a section is missing (for example, your hand calculations) the highest grade you can obtain is 50.

HW1: Compute components of an ANOVA summary table and analyze using SPSS, *twice*: one for NUMPOLYPS, and one for LARGESTSIZE, STATINS= IV; NUMPOLYPS AND LARGESTSIZE = DVs

HW2: Compute components of a repeated measures ANOVA summary table and analyze using SPSS.
"Time" = IV; MPILI_1 MPILI_2 MPILI_3 = DVs

HW3: Compute a mixed-factor 2-way ANOVA using SPSS.
DEMENTIA = Between factor; "Time" = Within factor, Up time (PREUP & POSTUP) = DV

HW4: Compute an ANCOVA by hand and using SPSS.
TXGROUP = IV; POSTCIGS = DV; PRECIGS = Covariate

HW5: Compute MANOVA using SPSS (no hand calculations)
STATINS= IV; NUMPOLYPS, LARGESTSIZE = DVs

HW6: Compute MANOVA using SPSS (no hand calculations)
EMPLOYEDAFTERSCI= IV;
MOBILITY, OCCUP, SOCINT = DVs

HW7: Perform sample size estimations for given parameters

HW8: Compute partial correlations on sample data set by hand.
Correlate PAIN with NUMBER controlling for COGNITIVE

HW9: Generate regression coefficients for a multiple regression model using SPSS.
PAIN = DV; INTENSITY, FREQUENCY, DURATION, & NUMBER = Predictors (IVs)

SPECIFIC COURSE REQUIREMENTS:

This course requires the completion of all homework (above), and the completion of the midterm and final examinations.

TEACHING METHODS/STRATEGIES:

This course involves the applications of statistical formulas and concepts using both pencil/paper problem solving as well as using computer applications. The course materials are presented audio-visually and active participation from all class members is expected.

GRADE CALCULATION (COURSE EVALUATION

	% of Final Grade
Homework Assignments:	1/3

& FINAL GRADING):	Midterm Exam: 1/3 Final Exam: 1/3 Students with a final grade of 91 to 100 will receive an 'A' Students with a final grade of 81 to 90 will receive a 'B' Students with a final grade of 71 to 80 will receive an 'C' A final grade of <71% constitutes failure.
STATUS OF RN LICENSURE:	All graduate nursing students must have an unencumbered license as designated by the Board of Nursing (BON). It is imperative that any student whose license becomes encumbered by the BON must immediately notify the Associate Dean for the PhD Program, Dr. Jennifer Gray. Failure to do so will result in dismissal from the PhD Program. The complete policy about encumbered RN license is available online at: http://www.uta.edu/nursing/grad/unencumbered
CONFIDENTIALITY AGREEMENT:	You signed a Confidentiality Form in orientation and were provided a copy of the form. Please take your copy of this Confidentiality Form with you to your clinical sites. Please do not sign other agency confidentiality forms. Contact your faculty if the agency requires you to sign their confidentiality form.
AMERICANS WITH DISABILITIES ACT:	The University of Texas at Arlington is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 93112 -- The Rehabilitation Act of 1973 as amended. With the passage of new federal legislation entitled Americans With Disabilities Act - (ADA), pursuant to section 504 of The Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens. As a faculty member, I am required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests with informing faculty of their need for accommodation and in providing authorized documentation through designated administrative channels. Information regarding specific diagnostic criteria and policies for obtaining academic accommodations can be found at www.uta.edu/disability. Also, you may visit the Office for Students with Disabilities in room 102 of University Hall or call them at (817) 272-3364.
STUDENT SUPPORT SERVICES	The University of Texas at Arlington supports a variety of student success programs to help you connect with the University and achieve academic success. They include learning assistance, developmental education, advising and mentoring, admission and transition, and federally funded programs. Students requiring assistance academically, personally, or socially should contact the Office of Student Success Programs at 817-272-6107 for more information and appropriate referrals.
STUDENT CODE OF	The University of Texas at Arlington School of Nursing supports the

ETHICS

Student Code of Ethics Policy. Students are responsible for knowing and complying with the Code. The Code can be found in the Student Handbook online: http://www.uta.edu/nursing/hbk/toc.htm

ACADEMIC DISHONESTY:

It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include suspension or expulsion from the University.

"Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts." (Regents' Rules and Regulations, Series 50101, Section 2.2)

PLAGIARISM:

Copying another student's paper or any portion of it is plagiarism. Additionally, copying a portion of published material (e.g., books or journals) without adequately documenting the source is plagiarism. If five or more words in sequence are taken from a source, those words must be placed in quotes and the source referenced with author's name, date of publication, and page number of publication. If the author's ideas are rephrased, by transposing words or expressing the same idea using different words, the idea must be attributed to the author by proper referencing, giving the author's name and date of publication. If a single author's ideas are discussed in more than one paragraph, the author must be referenced at the end of each paragraph. Authors whose words or ideas have been used in the preparation of a paper must be listed in the references cited at the end of the paper. Students are encouraged to review the plagiarism module from the UT Arlington Central Library via http://library.uta.edu/tutorials/Plagiarism

BOMB THREATS:

If anyone is tempted to call in a bomb threat, be aware that UTA will attempt to trace the phone call and prosecute all responsible parties. Every effort will be made to avoid cancellation of presentations/tests caused by bomb threats. Unannounced alternate sites will be available for these classes. Your instructor will make you aware of alternate class sites in the event that your classroom is not available.

E-CULTURE POLICY:

The University of Texas at Arlington has adopted the University email address as an official means of communication with students. Through the use of email, UT-Arlington is able to provide students with relevant and timely information, designed to facilitate student success. In particular, important information concerning department requirements, registration, financial aid and scholarships, payment of bills, and

graduation may be sent to students through email. All students are assigned an email account and information about activating and using it is available at www.uta.edu/email. Students are responsible for checking their email regularly.

NO GIFT POLICY:

In accordance with Regent Rules and Regulations and the UTA Standards of Conduct, the School of Nursing has a "no gift" policy. A donation to one of the UTA School of Nursing Scholarship Funds, found at the following link: Nursing Scholarship List would be an appropriate way to recognize a faculty member's contribution to your learning. For information regarding Scholarship Funds, please contact the Dean's office.

PhD COURSE SUPPORT STAFF:

Vivian Lail-Davis, Admin. Assistant, Room 512;
Phone: (817) 272-1038; Fax: (817) 272-2950;
Email: vivian@uta.edu

LIBRARY INFORMATION:

Helen Hough, Nursing Librarian
(817) 272-7429
hough@uta.edu
Research Information on Nursing:
http://www.uta.edu/library/research/rt-nursing.html

MISCELLANEOUS INFORMATION:

Inclement Weather (School Closing) Inquiries:
Metro (972) 601-2049

Fax Number - UTA School of Nursing: (817) 272-2950
Attn: PhD in Nursing Office

UTA Police (Emergency Only): (817) 272-3003

Mailing Address for Packages:
UTA School of Nursing
C/O (insert faculty name)
411 S. Nedderman Drive, Pickard Hall
Arlington, Texas 76019-0407

The University of Texas at Arlington
School of Nursing
PhD in Nursing Program

PHD IN NURSING WEBSITES

Description	Website
University of Texas Home Page	http://www.uta.edu
Graduate Catalog & Faculty	http://www.uta.edu/gradcatalog/nursing
PhD in Nursing Programs	http://www.uta.edu/nursing/PhD/program.php
PhD Nursing Courses & **Syllabi**	http://www.uta.edu/nursing/grad/phd-crsdescriptions
Faculty and Staff Email Contacts and Biosketches	http://www.uta.edu/nursing/directory
♦ Graduate Forms ♦ Student Confidentiality Statement ♦ Liability Policy ♦ Health Insurance Verification Form ♦ Traineeship Statement Forms	http://www.uta.edu/nursing/g-downloads.htm
Criminal Background Check (Group One)	http://www.dfwhc.org/GroupOne/
Instructions for E-Reserves	http://www.uta.edu/library/ Select under Library Catalogs (UTA Library Catalogs) Select Course Reserves Look for Instructor's Name Click Search Select Article Password is course abbreviation and course number. ALL CAPS no spaces (ex. NURS5340).