## Department of Rehabilitation and Disability Studies Southern University, Baton Rouge, LA

### REHB 565 Research Methods and Statistics Rehabilitation Counseling

## Course Syllabus Spring

### A. Instructor:

Alo Dutta, Ph.D., CRC, M.P.A. Associate Professor Department of Rehabilitation and Disability Studies 233 Blanks Hall Baton Rouge, LA 70813 Phone: 225-771-2335 Fax: 225-771-2293 E-mail: alodutta1992@aol.com

### **B.** Purpose:

The purpose of the course is to explore quantitative and qualitative research methods utilized in rehabilitation. It is designed to assist in the development of basic theoretical and practical knowledge of statistical principles and techniques necessary for the proper design, implementation, and analysis of data. The students enrolled in class are anticipated to be master's or doctoral candidates who will be working in the institutions of higher education, organizations conducting research and evaluation, state-federal rehabilitation system, community rehabilitation programs, private for-profit and not-for-profit agencies, and social service organizations.

### C. Description:

This course covers basic skills for conducting research. Research design and methodology are coupled with the statistical tools necessary for analyzing research data. Emphasis is placed on hypothesis testing and interpretation of results. Active engagement in data collection and analysis is required.

### **D. Student Learning Outcomes:**

Upon successful completion of the course, the student will be able:

- 1. To comprehend the role of research in the field of rehabilitation.
- 2. To knowledgeably read, comprehend, and evaluate research literature generated in rehabilitation and related human services disciplines.
- 3. To apply key research tenets such as reliability, validity, and objective measurement techniques into their practice.

- 4. To demonstrate the ability to apply technology to the task of remaining current in cutting edge issues in rehabilitation.
- 5. To recognize the legal and ethical considerations of research involving human subjects.
- 6. To competently design, implement, and report the findings of rehabilitation research projects in a professional acceptable manner.

# E. Required Readings:

- American Psychological Association. (2001). *Publication manual of the American Psychological Association* (5<sup>th</sup> ed.). Washington, DC: Author.
- Pyrczak, F. (2009). *Success at Statistics: A Worksheet with humor* (4<sup>th</sup> ed.). Glendale, CA: Pyrczak Publishing. **Textbook**

Basic User's Guide for Statistics Package for Social Sciences (18.0) - CD

# F. Additional Readings:

- Baker, T. L. (1999). *Doing social research* (3<sup>rd</sup> ed.). Boston: McGraw Hill.
- Bordens, K. S., & Abbott, B. B. (2002). *Research design and methods: A process approach* (5<sup>th</sup> ed.). Boston: McGraw Hill.
- Borg, W. R., & Gall, M. D. (1976). *Educational research: An introduction* (5<sup>th</sup> ed.). New York: David McKay Company, Inc.
- Chan, F., Lee, G. K., Lee, E., Kubota, C., & Allen, C. (2007). Structural equation modeling in rehabilitation research. *Rehabilitation Counseling Bulletin, 51*(1), 53-66. Available online http://www.subr.edu/science/rehabcounsel/RRIUP/PDF%20FOR%20% 20RRIUP/SEM-FC.pdf
- Creswell, J. W. (2002). *Research design: Qualitative and qualitative approaches.* Thousand Oaks, CA: Sage Publishers.
- Glass, G. V., & Hopkins, K. D. (1995) *Statistical methods in education and psychology* (3<sup>rd</sup> ed.). Boston: Allyn and Bacon.
- Issac, S. (1977). *Handbook in research and evaluation* (9<sup>th</sup> ed.). San Diego, CA: EdITS Publishers.
- Leedy, P. D. (1997). *Practical research: Planning and design* (6<sup>th</sup> ed.). Upper Saddle River, NJ: Prentice Hall.

- Lustig, D., & Strauser, D. (2004). Effect size and rehabilitation research. *Journal of Rehabilitation*. Available online http://findarticles.com/p/articles/ mi\_m0825/is\_4\_70/ai\_n8681400
- Mehrens, W. A., & Lehmann, I. J. (1973). *Measurement ane evaluation in educational psychology*. New York: Holt, Rinehart and Winston, Inc.
- Patten, M. L. (2000). *Understanding research methods* (2<sup>nd</sup> ed.). Los Angeles, CA: Pyrczak Publishing.
- Salkind, N. J. (2000). *Exploring research* (4<sup>th</sup> ed.). Upper Saddle River, NJ: Prentice Hall.
- Seelman, K. (2004). Trends in rehabilitation and disability: Transition from a medical model to an integrative model (Part 1 and Part 2). Available online http://www.disabilityworld.org/01-03\_04/access/rehabtrends1.shtml
- Staines, G. L., Cleland, C. M., & Blankertz, L. (2006). Counselor confounds in evaluations of vocational rehabilitation methods in substance dependency treatment. *Evaluation Review, 30*, 139-170.

#### G. Recommended Websites:

- National Institute on Disability and Rehabilitation Research (NIDRR) http://www.ed.gov/offices/OSERS/NIDRR/
- National Center for the Dissemination of Disability Research (NCDDR) http://www.ncddr.org/
- National Association for Rehabilitation Research and Training Centers (NARRTC) http://www.narrtc.org/
- Rehabilitation Services Administration (RSA) http://www.ed.gov/offices/OSERS/RSA/
- National Institutes of Health (NIH) http://www.nih.gov/
- Centers for Disease Control and Prevention (CDC) http://www.cdc.gov/
- Office of Minority Health and Research (OMHR) http://www.ninds.nih.gov/funding/office\_of\_minority\_health\_and\_research/ index.htm

U.S. Bureau of Census http://www.census.gov/ Research Reports http://www.census.gov/srd/www/byyear.html

U.S. Bureau of Labor Statistics http://www.bls.gov/home.htm

Disability Research Institute (DRI) http://www.als.uiuc.edu/dri/

- World Institute on Disability (WID) http://www.wid.org/
- Disability Statistics Center (DSC) http://dsc.ucsf.edu/
- University of Miami Libraries http://www.library.miami.edu/netguides/psymeth.html
- The Qualitative Report http://www.nova.edu/ssss/QR/web.html
- Forum: Qualitative Social Research http://www.qualitative-research.net/fqs/fqs-eng.htm

### H. Assignments:

Final grade will be composed of:

- 1. Class participation: requires active involvement of all students in discussion of assigned readings and course materials. **Two undocumented absences will be excused**. (Total 10 bonus points)
- 2. One two-page APA 6<sup>th</sup> edition style summary paper based on two FULL LENGTH refereed journal articles related to quantitative research METHODOLOGY in rehabilitation or related fields. The article MUST be published in a professional journal and no earlier than 2003. (Total 20 = 5% of the grade) Please use the following URLs as a guide http://www.census.gov/srd/www/abstract/rsm2005-02.html OR http://www.psychstat.missouristate.edu/multibook/mlt03.htm PLEASE SELECT ARTICLES THAT YOU CAN COMPREHEND These two articles, mentioned above, cannot be used for this assignment.

E-mail or show your articles before use - Once e-mailed/shown, the articles are taken and become unavailable to others.

- 3. Four homeworks MUST be completed using SPSS (18.0) software and relevant sections of the EDITED output must be submitted with a written report. Each is worth 25 points. (Total 100 = 25% of the grade)
- 4. Two quizzes emphasizing materials covered since the last quiz/test will be given. Each is worth 40 points. (Total 80 = 20% of the grade)
- 5. A 5-page APA 6<sup>th</sup> edition style critique on one of the methods of collecting QUALITATIVE data by using at least 3 refereed articles and/or book chapters published no later than 2000 (Total 40 = 10% of the grade) Please use the following URL as a guide http://www.qualitative-research.net/fqs-texte/2-05/05-2-43-e.htm PLEASE SELECT ARTICLES/BOOK CHAPTERS THAT YOU CAN COMPREHEND These article, mentioned above, cannot be used for this assignment. E-mail or show your articles before use - Once e-mailed/shown, the articles are taken and become unavailable to others.
- 6. Mid-semester examination will be comprehensive from the first day of class. (Total 60 = 15% of the grade)
- 7. Final examination will be comprehensive from the first day of class. (Total 80 = 20% of the grade)
- 8. Final SPSS examination (take home) MUST be completed using SPSS (18.0) software and relevant sections of the EDITED output must be submitted with a written report. (Total 20 = 10% of the grade)
- 9. Emulation of a Rehabilitation Counselor Role Model: All students must abide by the Professional Code of Conduct of the Commission on Rehabilitation Counselor Certification (CRCC) in class and during off-campus assignments.

## I. Accommodations for students with special needs:

Students with disabilities should register with the SUBR Office of Students with Disabilities (ODS) and make the needs for accommodations known to the Director of ODS (Ms. Patricia Hebert - Phone: 225-771-3950). The instructor, with assistance from ODS and other recommended social service agencies, will make reasonable accommodations for the student.

## J. Livetext Subscription:

Southern University and A&M College-Baton Rouge has entered into partnership with LiveText, Inc. to provide online academic resources for student collaboration and learning outcomes assessment. Therefore, all students enrolled in this course are required to purchase a subscription from LiveText, Inc. through the Southern University Bookstore. LiveText, Inc. provides students with the electronic tools and services needed to serve them in their courses and in their career or academic pursuits beyond graduation.

LiveText is a dynamic tool that will enable you to:

- 1. Create Electronic Portfolios for storing and displaying coursework for use anytime and anyplace;
- Share your résumés, professional portfolios and virtually any projects that can be photographed, video recorded, and uploaded to prospective employers and others who need or want to know about your accomplishments;
- 3. Engage in discussion boards with other students, exchange feedback, and create study groups and other types of social networks.
- Complete assignments in key/required courses where LiveText has been embedded (without LiveText, you will not be able to complete these assignments).
- 5. Create a complete record of your academic career that is malleable and easily accessible.
- 6. Engage in developing a results driven culture of assessment at Southern University.
- 7. Participate in a process that will allow for data-driven curricular improvements that foster improved student learning and performance.

## K. Administrative requirements:

- 1. Attendance per university requirements. You are allowed to miss ONE class without penalty. After that every two absences will be penalized by 5% deduction of your final score in this course. Coming late to class or leaving the class early (15 minutes or more) is counted as an absence.
- 2. If you miss a class, you will not get any point for the quiz given in that class. Permission to make up exams will be based on the student's ability to substantiate the need to do so with the final decision made by the instructor. Any make-up quiz or test will have more degree of difficulty than the original one.
- 3. Assignments are to be turned in by the due date. Late assignments will be worth 10% less per week than the original total.

- 4. **You need to bring your laptop to class every day**. SPSS 18.0 will be loaded in your laptop by the Department of Rehabilitation and Disability Studies.
- 5. Cell phones must be switched off and should not be in sight during class.
- 6. Academic honesty policy: Academic integrity is the foundation of an academic community. Academic integrity applies to research as well as undergraduate and graduate coursework. Academic misconduct includes, but is not limited to cheating, fabrication, plagiarism, altering graded examinations for additional credit, having another person take an examination for you, or facilitating academic dishonesty. Any member of the university community who suspects that a violation of the academic honesty policy may have occurred may report it to the instructor of record. If the instructor of record is unavailable, or the case is outside the scope of the course, it should be reported to the dean of the School/College/Graduate Division offering the course.

## L. Grading:

Grades will be based on total points earned, as follows:

90% (360 or above)	= A
80% (320 - 359)	= B
70% (280 - 319)	= C
60% (279 or below)	= F

### M. Class:

Tuesday	4:00 PM - 6:50 PM
	Blanks Room 418

## N. Office Hours:

Alo Dutta, Ph.D., CRC, M.P.A. Office hours: 11:00 PM - 2:00 PM Mondays 11:00 PM - 2:00 PM Wednesdays

	Department of Rehabilitation and Disability Studies REHB 565 Research Methods and Statistics Class Schedule	
Spring, 2011		Dr. A. Dutta
Day 1	NIDRR's Long Range Plan: 2005-2011 Ethical and legal issues in research Sampling and generalizability	Chs. 27, 28
Day 2	Measurement, reliability, and validity Non-experimental research methods Experimental research methods Quasi-experimental research	Ch. 2
	Two-page summary	
	Study Session 1 during 12:00 PM – 2:00 PM (Wimba Optional)	
Day 3	Review of articles on research design Data collection and descriptive statistics Statistical Package for Social Sciences (SPSS 18.0): Homework 1 Assigned	Part A Session 1
	Quiz I	
Day 4	Inferential statistics Parametric and non-parametric statistics Hypothesis testing t-test	Part B
	Study Session 2 during 12:00 PM – 2:00 PM (Wimba Optional)	
	First quarter grades	
	Homework 1 due via e-mail by 5:00 PM CST	
Day 5	Review of articles on comparison of means Inferential statistics Analysis of variance (ANOVA)	Part B
	Multiple comparison Statistical Package for Social Sciences (SPSS 18.0): Homework 2 Assigned	Part B Session 2

Study Session 3 during 12:00 PM – 2:00 PM (optional)

Day 6	Inferential statistics Analysis of variance (ANOVA)	Part B
	Correlation: The measurement of relationships Statistical Package for Social Sciences (SPSS 18.0): Homework 3 Assigned	Part A Session 3
	Study Session 4 during 12:00 PM – 2:00 PM (Wimba Optional)	
	Homework 2 due via e-mail by 5:00 PM CST	
Day 7	Review of articles on ANOVA Correlation: The measurement of relationships Statistical Package for Social Sciences (SPSS 18.0):	Part A Session 4
Day 8	Mardi Gras	
	Study Session 5 during 12:00 PM – 2:00 PM (Wimba Optional)	
Day 9	Mid-Term Examination	
Day 10	Simple and Multiple Regression Statistical Package for Social Sciences (SPSS 18.0): Homework 4 Assigned	Part B Session 5
	Study Session 6 during 12:00 PM – 2:00 PM (Wimba Optional)	
Day 11	Spring Break	
	Homework 3 due via e-mail by 5:00 PM CST	
Day 12	Review of articles on regression Recapitulation for Homework 4	
Day 13	Nonparametric statistics Chi square Mann-Whitney U test	Part B
	Statistical Package for Social Sciences (SPSS 18.00)	: Session 6
	5-Page critique due via e-mail by 5:00 PM CST	
Day 14	Quantitative vs Qualitative	
	Quiz II	
	Review of the finals	
	Homework 4 due via e-mail by 5:00 PM CST	

Day 15 Final Examination Part I: In class written

> Final Examination Part II: SPSS due via e-mail by 5:00 PM CST