

**ALHE 5500**  
**Methods of Research in Allied Health**  
3.0 Credit Hours

**Course Description**

This course is intended to enhance the allied health practitioner's skill in the development and interpretation of research. Discussions will be conducted on various research designs, statistical procedures, sampling techniques and literature reviews. Assignments that include advanced writing applications and technology utilization are required. Graduate students on a non-thesis track may wish to start the construction of their capstone project in this course, and thesis track students may complete the basics of Chapters 1, 2, and 3 in this course.

**Course Topics and Objectives**

The student will be introduced to the activities of the research process. A systematic approach will be used to review the essential steps in research methodology. Topics include: identifying the problem, reviewing information, collecting data, analyzing data, and drawing conclusions. At the completion of this course the student will be able to:

1. Discuss the procedures in the scientific method and the components of a research project.
2. Discuss the differences between independent and dependent variables.
3. Discuss other possible types of variables.
4. Address operational definitions for individual studies.
5. Identify the different scales of measurement.
6. Discuss the types of reliability.
7. Examine various types of reliability.
8. Examine internal and external validity.
9. Differentiate between qualitative and quantitative research designs.
10. Discuss advantages and disadvantages of qualitative and quantitative research designs.
11. Discuss the process of randomization.
12. Discuss the types of sampling techniques.
13. Use descriptive statistics in the analysis of data.
14. Use inferential statistics in the analysis of data.
15. Discuss and apply the different parametric and nonparametric statistics.
16. Accept or reject null hypotheses, focus on preventing Type 1 and Type 2 error.
17. Differentiate between various types of statistical procedures.
18. Identify the sources of information for review of literature.
19. Perform a literature review of a topic of interest.
20. Successfully apply to institutional review board (IRB) regarding their project.

**Required Textbooks**

1. Cottrell, R. R. & McKenzie, J. F. (2011). Health promotion and education research methods, 2<sup>nd</sup> Ed. Boston: Jones and Bartlett. ISBN 9780763775070
2. Salkind, N. J. (2019). Statistics for people who think they hate statistics, 7th ed. Thousand Oaks, CA: Sage. ISBN 1544387601 (Paperback)

- American Psychological Association (2019). APA Publications Manual, 7th ed. Washington: APA. ISBN 1433832178 (Paperback)

### **Supplemental Texts:**

Bainbridge, W. S. (1992). Social research methods. Belmont, CA: Wadsworth. ISBN 0-534-13122-0.

Pope, C. & Mays, N. (2000). Qualitative research in health care (2nd ed.). London: BMJ Books. ISBN 0-7279-1396-4.

Stevens, J. (1996). Applied multivariate statistics for the social sciences. Mahwah, NJ: Lawrence Erlbaum Associates. ISBN 0-8058-1671-2.

### **Software Requirements**

Required:

IBM SPSS Statistics Grad Pack

Microsoft Office Suite (Word, PowerPoint, Access, Excel).

SPSS, or a statistical software package of the participant's choice.

### **Assignments:**

Online class participation (10 points)

All students are expected to actively participate in online class discussions. Each discussion question posted will be assigned a date by which the student must respond. If a student is unable to fulfill this requirement for any reason, he/she should notify the instructor prior to the class and make alternative arrangements. The aim is to encourage interaction among students and faculty, not simply to present information. ***Students are required to respond to all discussion questions.*** Student responses to discussion questions must be substantive, that is, thoughtful and analytical. Because the D2L system has its own way of formatting material posted on the discussion feature, the student will not be expected to strictly follow APA guidelines for discussion forum postings. However, the student is held to academic standards of writing style and the use of proper grammar, punctuation, and spelling. You should post at least 4 times each week and read all of the postings of other students.

Statistics homework (50 points)

The student will complete the assigned statistics homework and will submit the assignments to the course dropbox.

Research project (40 points)

The student, working from the theoretical and methodological framework established in the reading of our texts, will write a 15 (total pages) paper with an abstract. While not absolutely required, ***students should use this project as the initial development stage for the first three chapters (the prospectus) of their thesis or capstone project.*** You may want to consult your graduate committee chair for input as you select a topic. Research Course Instructor approval of your project's topic is required in week 4 of the course (I recognize that project titles and topics change as we conduct research). ***No final grade for the course can be assigned until the research project is completed.***

**Grading Scale:**

(% of available points):

100-95 A -----\*82-80 C+

94-92A-----\*79-75 C

91-89 B+-----\*74-73 C-

88-86 B-----\*72-71D+

85-83 B-----\*70-68D

-----\* <67F

**\*Unsatisfactory grades in the MSAH Program****Library**

The East Tennessee State University Library is available to all students enrolled in the program. Links to library materials (such as electronic journals, databases, interlibrary loans, digital reserves, dictionaries, encyclopedias, maps, and other librarian support) and Internet resources needed by learners to complete online assignments and as background reading must be included in all courses.

**Students with Disabilities**

Qualified students with disabilities will be provided reasonable and necessary academic accommodations if determined eligible by the appropriate disability services staff at their home institution. Prior to granting disability accommodations in this course, the instructor must receive written verification of a student's eligibility for specific accommodations from the disability services staff at the home institution. It is the student's responsibility to initiate contact with his/her home institutions disability services staff and to follow the established procedures for having the accommodation notice sent to the instructor.

**Syllabus Changes**

The instructor reserves the right to make changes as necessary to the syllabus. If changes are necessitated during the term of the course, the instructor will immediately notify students of such changes both by individual email communication and posting both notification and nature of change(s) on the course bulletin board.

**Technical Support**

If you are having problems logging into the course, timing out of the course, using the course website tools, or other technical problems, please the course instructor as soon as possible.

## References

- Babbie, E. (1995). *The practice of social research*. Belmont, CA: Wadsworth. ISBN 0-534-18744-7.
- Bailey, D. M. (1997). *Research for the health professional: A practical guide* (2nd Edition). Philadelphia: F. A. Davis. ISBN 0-8036-0151-4.
- Bainbridge, W. S. (1992). *Social research methods*. Belmont, CA: Wadsworth. ISBN 0-534-13122-0.
- Gall, M. D., Borg, W. R., & Gall, J. P. (1996). *Educational research: An introduction*. New York: Longman Publishers. ISBN 0-8013-0980-8.
- Mishoe, S. C. & Welch, M. A., Jr. (2002). *Critical thinking in respiratory care*. New York: McGraw-Hill. ISBN 0-07-134474-8.
- Polgar, S. & Thomas, S. A. (2000). *Introduction to research in the health sciences*. New York: Harcourt-Livingston.
- Pope, C. & Mays, N. (2000). *Qualitative research in health care* (2nd ed.). London: BMJ Books. ISBN 0-7279-1396-4.
- Stein, F. & Cutler, S. K. (1996). *Clinical research in allied health and special education*. San Diego: Singular Publishing Group. ISBN 1-5659-3631-0.
- Stevens, J. (1996). *Applied multivariate statistics for the social sciences*. Mahwah, NJ: Lawrence Erlbaum Associates. ISBN 0-8058-1671-2.
- Stringer, E. & Genat, W. J. (2004). *Action research in health*. Columbus, OH: Pearson Merrill Prentice Hall. ISBN 0-13-098578-3.