

GEORGE MASON UNIVERSITY
School of Recreation, Health, and Tourism

SRST 623: Research Design and Statistical Reasoning (3 credits)
Fall 2012

DAY/TIME:	T 7:20 p. m. - 10:00 p.m.	LOCATION:	2203 RAC
INSTRUCTOR:	Dr. George Banks	EMAIL ADDRESS:	gbanks@erols.com
OFFICE LOCATION:	by appointment	PHONE NUMBER:	(703) 620-1297
OFFICE HOURS:	by appointment	FAX NUMBER:	by arrangement

PREREQUISITES: Graduate standing

COURSE DESCRIPTION

Introduces basic principles of scientific and scholarly inquiry in Sport and Recreation Studies. Explores the logic and practice of methods and techniques employed in research related to sport and recreation.

COURSE OBJECTIVES

Students will be able to:

1. Demonstrate appropriate use of research terminology and application of basic concepts and principles associated with scientific research;
2. Critically evaluate published research in scientific journals and the popular press;
3. Demonstrate the use of research methodologies and designs employed in SRST research;
4. Apply critical thinking and research findings in SRST practice;
5. Use descriptive and inferential statistics in analyzing research data; and
6. Prepare a sound and feasible research proposal.

NATURE OF COURSE DELIVERY

This course includes multiple instructional strategies. Individual session formats vary and may include lecture, small group/large group discussion, hands-on, interactive work, and student presentations.

REQUIRED TEXT

Leedy, P. D., & Ormrod, J. E. (2009). *Practical research: Planning and design* (9th ed.). Columbus, OH: Prentice Hall, **(PR)**

RECOMMENDED READING

Thomas, J. R., Nelson, J. K., & Silverman, S. J. (2010). *Research methods in physical activity* (6th ed.). Champaign, IL: Human Kinetics.

American Psychological Association. (2009). *Publication manual of the American Psychological Association* (6th ed.). Washington, DC: Author.

SRST Research Focus

Areas:

International Sport Management
Recreation Administration
Sports and Leisure
Sport Coaching
Sport Management

Journals:

Human Dimensions of Natural Resource Management
International Journal of Sport Communication
International Journal of Sport Management
Journal of Leisure Research
Journal of Park and Recreation Administration
Journal of Sport Management
Leisure Sciences
Leisure Studies
Quest
Research Quarterly for Exercise and Sport
Sociology of Sport Journal
Therapeutic Recreation Journal
Other journals as identified

Evaluation

A. Assignments (Guidance is attached.)	<u>Points</u>
Project 1. Establish structures.	15
Project 2. Review the research literature for SRST.	15
Project 3. Develop a framework outlining qualitative and quantitative methods for research.	15
Project 4. Develop a framework outlining descriptive and inferential procedures of statistical analysis for research.	15
Project 5. Draft the research plan.	<u>40</u>
	Total: 100

B. Final Grading Scale

94-100 = A
90-93 = A-
88-89 = B+
84-87 = B
80-83 = B-
70-79 = C
0-69 = F

Student Expectations

Students must adhere to the guidelines of the George Mason University Honor Code [See <http://academicintegrity.gmu.edu/honorcode/>].

Students with disabilities who seek accommodations in a course must be registered with the George Mason University Office of Disability Services (ODS) and inform their instructor, in writing, at the beginning of the semester [See <http://ods.gmu.edu/>].

Students must follow the university policy for Responsible Use of Computing [See <http://universitypolicy.gmu.edu/1301gen.html>].

Students are responsible for the content of university communications sent to their George Mason University email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students solely through their Mason email account.

Students must follow the university policy stating that all sound emitting devices shall be turned off during class unless otherwise authorized by the instructor.

Students are expected to exhibit professional behaviors and dispositions at all times.

Campus Resources

The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance [See <http://caps.gmu.edu/>].

The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing [See <http://writingcenter.gmu.edu/>].

For additional information on the College of Education and Human Development, School of Recreation, Health, and Tourism, please visit our website [See <http://rht.gmu.edu>].

CORE VALUES COMMITMENT: The College of Education and Human Development is committed to collaboration, ethical leadership, innovation, research-based practice, and social justice. Students are expected to adhere to these principles.



Course Calendar

Dates	Topics/Assignments
8/28	Course Overview Building the Scientific/Research Context Examining Theoretical Elements Ch 1 PR
9/4	Establishing Structures SRST Theoretical Structure Research Framework Ch 1, 2 and 3 PR
9/11	Library Searching: Exploring Data Bases for SRST Research Reviewing SRST Research Literature - SRST theoretical structure - Research framework Guest Instructor: Anne Driscoll, Education Liaison Librarian, Fenwick Library, George Mason University, Fairfax Campus. Class will meet at the Fenwick Library Instruction Room. Review of Project 1 Preview of Project 2 Ch 1, 2, 3 and 4 PR
9/18	Research Information Processing A Research Information Processing Framework - Hypothetical-Deductive Modeling (Dr. Robert Carkhuff - http://rcarkhuff.wordpress.com/body-of-work/) Inductive Reasoning Deductive Reasoning Definition of Constructs Review of the SRST Theoretical and Research Framework (Project 1) Ch 1, 2, 3 and 4 PR Reading: Dr. George Banks, "Thinking Skills for Innovation . . ." http://www.paedeia.com/Thinking%20Skills.asp Due: Project 1
9/25	Overview of Measurement in Research Operational Definition of Constructs Scaling Reliability Validity Ch 2 and 5 PR Due: Project 2

- 10/2** Building the Research Plan
 SRST Theoretical Structure (Project 1)
 Analysis of SRST Research Literature (Project 2)
 Review of the Research Framework (Project 1)
 Identification of SRST Research Problem and Goal from Review of Project 1
 Overview of Qualitative and Quantitative Research Methods
 Ethical Issues in Research
 Preview of Project 5
 Ch 2, 3, 4 and 5 **PR**
- 10/9** Review of Qualitative Research Procedures
 The Research Problem
 Analysis of the Research Framework
 Specifying the Research Question
 Qualitative Research Methodology
 Data Analysis
 Validity
 Ch 7, 8 and 5 **PR**
- 10/16** Quantitative Descriptive Research
 The Research Problem
 Analysis of the Research Framework
 Specifying the Research Question
 Quantitative Descriptive Research Methodology
 Validity
 Ch 9 and 5 **PR**
- 10/23** Quantitative: Experimental Research
 The Research Problem
 Analysis of the Research Framework
 Specifying the Research Hypothesis
 Experimental Designs
 Validity
 Ch 10 and 5 **PR**
- 10/30** Quantitative Data Analysis: Descriptive Statistics
 Analysis of the Research Framework
 Statistical Procedures
 - Central Tendency
 - Variability
 - Association: Correlation
 Ch 11 **PR**
Due: Project 3

- 11/6** Quantitative Data Analysis: Inferential Statistics
 Analysis of the Research Framework
 Statistical Procedures
 - Population Parameters
 - Hypothesis Testing
 Nonparametric Methods
 Ch 11 **PR**
- 11/13** Completing the Research Plan and Proposal
 Complete the Research Plan (Preview Project 5)
 - Identification of structures (Project 1)
 - - SRST Theoretical structure
 - - Research framework
 - Analysis of SRST research literature for the research framework (Project 2)
 - Identification of SRST research problem and goal from review of Project 1
 - Select Qualitative and Quantitative research design methodology (Projects 3 and 4)
 - Data collection
 Draft the Research Proposal
 - Proposal organization
 - Format
 - Writing guidelines
 Ch 1, 2, 3, 4, 5, 6, and 12 **PR**
Publication Manual of the American Psychological Association
Due: Project 4
- 11/20** Directions for SRST Research: A Perspective
 Structures
 - SRST theoretical structure
 - Research framework
 SRST Delivery Problems for Research Inquiry
 Ch 1, 2, 3, 4, and 5 **PR**
- 11/27** Review Draft Research Plans
 Class review of Drafts for Project 5
 - SRST theoretical structure
 - Research framework
 - Research problems
 Class Discussion and Feedback
 SRST: Introduction to Writing a Project or Thesis
 Ch 1 - 11 **PR**
- 12/4** Building Programs for Continuous Research in SRST
 Course Wrap-up
Due: Project 5

Project Guidance

Project 1. Establish Structures. (15 points)

Theoretical: Describe the SRST area within which you work: International Sport Management, Recreation Administration, Sports and Leisure, Sport Coaching, Sport Management, or other.

- o Intended outcomes
- o Resources
- o Strategies
- o Assessment of intended outcomes at the following levels:
 - process
 - acquisition
 - use
 - results

Research: Describe the delivery setting within which you work in the SRST area.

- o Intended outcomes
- o Resources
- o Strategies
- o Assessment of intended outcomes at the following levels:
 - process
 - acquisition
 - use
 - results

Project 2. Review the research literature for SRST. (15 points)

Select ten (10) research articles from the SRST area within which you work: International Sport Management, Recreation Administration, Sports and Leisure, Sport Coaching, Sport Management, or other. Include five research articles for the delivery setting within which you work in the SRST area.

For each article provide the following:

- o A brief summary of the issue/problem/question addressed (1 paragraph)
- o A specific statement of problem, question, or hypothesis
- o Key concepts, constructs, terms, variables related to the research problem or question
- o Definitions for key concepts, constructs, terms, or variables.
- o A brief description of the research methodology as appropriate (1 to 2 paragraphs)
- o A brief description of the statistical analysis (1 paragraph)
- o A brief summary of research results (1 paragraph)

For this project students will complete an in-class analysis of their research articles with relation to SRST theoretical structures and research frameworks.

Project 3. Develop a framework outlining qualitative and quantitative research methods for research. (15 points)

For each qualitative and quantitative method:

- o What is involved
- o Objective
- o Reasons

- o Context
- o Procedures

Project 4. Develop a framework outlining descriptive and inferential procedures of statistical analysis for research. (15 points)

For each descriptive and inferential procedure list the following:

- o What is involved
- o Objective
- o Reasons
- o Context
- o Procedures

Project 5. Draft the research plan. (40 points)

Develop a draft research plan outline.

1. Identify structures. (Project 1)
 - o SRST Theoretical Structure
 - o Research Framework
2. Summarize SRST research literature related to the research framework. (Project 2)
 - o A summary of issues/problems/questions addressed
 - o Specific statements of problem, question, or hypothesis included
 - o Key concepts, constructs, terms, variables related to the research issues/problems/questions
 - o Definitions for key concepts, constructs, terms, or variables.
 - o A brief description of the research methodologies used
 - o A brief description of the statistical analyses used
 - o A brief summary of research results
3. State the SRST research problem and goal identified from a review of the research framework and the research literature review.
4. Identify and operationally define key constructs.
5. State the specific research question or hypothesis addressed through the research methodology.
6. Describe qualitative or quantitative procedures to be used. (Project 3)
 - o Specific methods
 - o Sampling
 - o Data collection
 - o Validity
 - o Data analysis. (Project 4)