

GEORGE MASON UNIVERSITY  
School of Recreation, Health, and Tourism

SRST 623—Research Design and Statistical Reasoning (3)  
Spring 2012

DAY/TIME:	M 7:20 p.m. - 10:00 p.m.	LOCATION:	248 Bull Run Hall
PROFESSOR:	Dr. George Banks	EMAIL:	gbanks1@gmu.edu
		ADDRESS:	gbanks@erols.com
OFFICE LOCATION:	RHT Suite	PHONE:	703.620.1297
		NUMBER:	
OFFICE HOURS:	By appointment	FAX NUMBER:	703.993.2025

PREREQUISITES: Graduate standing.

#### COURSE DESCRIPTION

Introduces techniques of research and methods of data analysis.

#### COURSE OVERVIEW

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.

**Four** (4) smaller writing exercises will be completed throughout the semester, thoroughly critiqued and graded. Together, these will form the basis for your final research proposal. It is to your benefit to incorporate the comments given, as each assignment builds upon the next. Some class time will also be devoted to reviews and critiques of written submissions. All written work must be typed and follow guidelines of the *Publications Manual of the American Psychological Association (APA)* (sixth edition).

Students are held to the standards of the George Mason University Honor Code. You are expected to attend all class sections, actively participate in class discussions, complete in-class exercises and fulfill all assignments. Assignments must be turned in at the beginning of class on the specified date due or **no credit will be given**. Assignments have been scheduled in advance to provide you with sufficient time to plan and complete the assignment. Only students with extreme emergencies, a documented medical excuse or university-sponsored functions discussed with the professor prior to the due date will be given consideration for exception. Please see the professor for further clarification on individual cases. It is recommended that students make copies of all written work submitted.

#### 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.

#### COURSE OBJECTIVES

At the completion of this course, students should 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.

#### REQUIRED READING

Leedy, P., & Ormrod, J. E. (2009). *Practical research* (9th ed.). Boston: Pearson. **(PR)**

#### RECOMMENDED (OPTIONAL) READING

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

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

#### SRST Research Focus Areas:

- International Sport Management
- Recreation Administration
- Sport and Leisure Studies
- 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

#### GRADING

This course will be graded on a point system, with a total of 100 possible points.

Requirements	Points
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>

## GRADING SCALE

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

## TENTATIVE COURSE OUTLINE

DATE		ASSIGNMENT	READING
January	23	Course Overview; Building the Scientific/Research Context; Examining Theoretical Elements	Chapter 1, <b>PR</b>
	30	Establishing Structures; SRST Theoretical Structure; Research Framework	Chapters 1, 2, 3, <b>PR</b>
February	6	Library Searching: Exploring Databases for SRST Research; Reviewing SRST Research Literature—SRST theoretical structure/Research Framework  Guest Instructor: Janna Mattson, MLS, Social Sciences Liaison Librarian, Mercer Library, George Mason University, Prince William Campus  Review of Project 1; Preview of Project 2  <b>Due:</b> Project 1	Chapters 1, 2, 3, 4 <b>PR</b>
	13	A Research Information Processing Framework: Hypothetical-Deductive Modeling (Dr. Robert Carkhuff - <a href="http://rcarkhuff.wordpress.com/body-of-work/">http://rcarkhuff.wordpress.com/body-of-work/</a> )  Inductive Reasoning; Deductive Reasoning; Definition of Constructs; Review of the SRST Theoretical and Research Framework (Project 1)  <b>Due:</b> Project 2	Chapters 1, 2, 3, 4 <b>PR</b> ; Reading: Dr. George Banks, "Thinking Skills for Innovation . . ."  <a href="http://www.paedeia.com/Thinking%20Skills.asp">http://www.paedeia.com/Thinking%20Skills.asp</a>
	20	Overview of Measurement in Research; Operational Definition of Constructs: Scaling, Reliability, Validity	Chapters 2, 5 <b>PR</b> ; Reading: Dr. Robert R. Carkhuff - <i>The Art of Helping in the 21st Century</i> .
	27	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	Chapters 2, 3, 4, 5 <b>PR</b>

DATE		ASSIGNMENT	READING
March	5	Review of Qualitative Research Procedures: The Research Problem; Analysis of the Research Framework; Specifying the Research Question; Qualitative Research Methodology; Data Collection; Validity	Chapters 7, 8, 5 <b>PR</b>
	12	SPRING BREAK (NO CLASS)	
	19	Quantitative Descriptive Research: The Research Problem; Analysis of the Research Framework; Specifying the Research Question; Quantitative Descriptive Research Methodology; Data Collection; Validity	Chapters 9, 5 <b>PR</b>
	26	Quantitative: Experimental Research: The Research Problem; Analysis of the Research Framework; Specifying the Research Hypothesis; Experimental Designs; Validity	Chapters 10, 5 <b>PR</b>
April	2	Quantitative Data: Descriptive Statistics; Analysis of the Research Framework; Statistical Procedures—Central Tendency, Variability, Association: Correlation  <b>Due:</b> Project 3	Chapter 11 <b>PR</b>
	9	Quantitative Data: Inferential Statistics; Analysis of the Research Framework; Statistical Procedures—Population Parameters, Hypothesis Testing; Nonparametric Methods	Chapter 11 <b>PR</b>
	16	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  <b>Due:</b> Project 4	Chapters 1, 2, 3, 4, 5, 6, 12 <b>PR</b> ; <i>Publication Manual of the American Psychological Association</i>
	23	Directions for SRST Research: A Perspective; Structures: SRST theoretical structure, Research framework, SRST Delivery Problems for Research Inquiry	Chapters 1, 2, 3, 4, 5 <b>PR</b>

DATE		ASSIGNMENT	READING
	30	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	Chapters 1-11 <b>PR</b>
May	7	Building Programs for Continuous Research in SRST; Course Wrap-up  <b>Due:</b> Project 5	

### *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.



## **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 procedure 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)