PREREQUISITES: 60 credits and STAT 250, DESC 210, OM 210, SOC 313, OM 250, or IT 250.

COURSE DESCRIPTION: Covers the development of empirical research designs for both practical and theoretical problems in health, fitness, and recreation resources management. Includes literature review of hypothesized relationships, and formulation of research proposals.

COURSE OBJECTIVES: At the completion of the course, students should be able to:
1. Define and demonstrate appropriate use of research terminology;
2. Critically evaluate published research in scientific journals and the popular press;
3. Formulate research problem statements;
4. Enumerate the values inherent in the practice of scientific research;
5. Conduct a thorough review of literature and synthesize the findings; and,
6. Prepare and sound and feasible research proposal.

Further, upon completion of this course, students will meet the following professional accreditation standards:

<table>
<thead>
<tr>
<th>Council on Accreditation of Parks, Recreation, and Tourism Related Professions standards met</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.14.07 Evaluation of programs/events.</td>
</tr>
<tr>
<td>8.17 Ability to apply basic principles of research and data analysis related to recreation, park resources, and leisure services.</td>
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<tr>
<td>8.23 Ability to utilize the tools of professional communication.</td>
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<tr>
<td>8.24 Ability to apply current technology to professional practice.</td>
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<tr>
<td>9A.05 Understanding of and ability to apply techniques of program evaluation and policy analysis which measure service effectiveness and the extent to which programmatic and organizational goals and objectives have been achieved.</td>
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</tbody>
</table>

Commission on the Accreditation of Athletic Training Education competencies met

<table>
<thead>
<tr>
<th>PD 13</th>
<th>Describe and differentiate the types of quantitative and qualitative research and describe components and process of scientific research (including statistical decision-making) as it relates to athletic training research.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PD 14</td>
<td>Interpret the current research in athletic training and other related medical and health areas and apply the results to the daily practice of athletic training.</td>
</tr>
<tr>
<td>PD 4</td>
<td>Develop a research project (to include but not limited to case study, clinical research project, literature review) for an athletic training-related topic.</td>
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REQUIRED READINGS & CLASS ITEMS:
1 USB Flash Drive
Websites & Handouts as provided in class.

ACADEMIC INTEGRITY: GMU is an Honor Code University; please see the University Catalog for a full description of the code and the honor committee process. The principle of academic integrity is taken very seriously and violations are treated gravely. What does academic integrity mean in this course? First, it means that when you are responsible for a task, you will be the one to perform that task. When you rely on someone else’s work in an aspect of the performance of that task, you will give full credit in the proper, accepted form. Another aspect of academic integrity is the free play of
ideas. Vigorous discussion and debate are encouraged in this course, the firm expectation that all aspects of the class will be conducted with civility and respect for differing ideas, perspectives and traditions. When in doubt, please ask for guidance and clarification.

**COURSE OVERVIEW:** This course is a designated “Writing Intensive” (WI) – fulfilling, in part, the WI requirements for all HFRR majors – therefore, each student will complete at least 3,500 words of graded writing assignments. To help make this a manageable task, we divided the course into 5 smaller writing exercises that you will complete over the semester. These will be critiqued, graded, and will form the basis for your final Research Proposal.

For this course, you can choose to follow the guidelines of either the *Publication Manual of the American Psychological Association* (APA) (6th Edition) or the *American Medical Association* (10th Edition).

Communication is an important facet of this course. As such, I ask that you check our Blackboard DAILY for messages and updates. Keep a special eye out for weather related announcements!

We will all be expected to attend all class sessions, actively participate in class discussions, complete in-class exercises, and fulfill all assignments.

**GENERAL EDUCATION OUTCOMES:** Written communication is one of the foundation requirements of Mason’s general education curriculum. Mason’s nationally recognized writing program emphasizes writing as a process: it is not simply a way of communicating already formulated thoughts, but a way of discovering, exploring and developing new ideas. On your way to completing your proposal, you will go through the recursive processes of researching, drafting, and revising and will engage in critical thinking at all stages.

As part of the written communication component and in addition to our course objectives, upon successfully completing this course, you will be able to:

- Analyze and synthesize research using methods appropriate to Recreation, Health, and Tourism (RHT);
- Make reasoned, well-organized arguments with introductions, thesis statements, supporting evidence, and conclusions appropriate to RHT;
- Use credible evidence to include, as applicable, data from credible primary and/or secondary sources, integrated and documented accurately according to APA or AMA styles;
- Employ rhetorical strategies suited to the purpose(s) and audience(s) for the writing, to include appropriate vocabulary, voice, tone, and level of formality;
- Produce writing that employs the organizational techniques, formats, and genres typical to RHT; and,
- Produce writing that demonstrates proficiency in standard edited American English, including correct grammar/syntax, sentence structure, word choice, and punctuation.

(for additional information, please see [https://assessment.gmu.edu/Genedassessment/outcomes.cfm](https://assessment.gmu.edu/Genedassessment/outcomes.cfm))

**EVALUATION:** This course will be graded on a percentage system for a total of 100% distributed as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Article Review &amp; Research Classification</td>
<td>5%</td>
</tr>
<tr>
<td>Introduction, Problem Statement, Lit Review, Hypothesis, Variables</td>
<td>15%</td>
</tr>
<tr>
<td>Sampling Plan</td>
<td>10%</td>
</tr>
<tr>
<td>Research Design, Measurement and Data Collection</td>
<td>15%</td>
</tr>
<tr>
<td>Analysis Plan</td>
<td>10%</td>
</tr>
<tr>
<td>Research Presentation &amp; Handout</td>
<td>10%</td>
</tr>
<tr>
<td>Final Research Proposal</td>
<td>20%</td>
</tr>
<tr>
<td>Class Participation (quizzes, in-class exercises)</td>
<td>15%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

**Grading Scale**

- A+ = 98-100
- B+ = 88-89
- C+ = 78-79
- D = 60-69
- A = 94-97
- B = 84-87
- C = 74-77
- F = 0-59
- A- = 90-93
- B- = 80-83
- C- = 70-73
ASSIGNMENTS: Unless otherwise notes, our papers will be submitted to a SafeAssign folder on our course Blackboard. This allows for an “originality check” and you can also view your own originality report. Assignments will be due at the beginning of class on the specific due date. All written papers are to submitted in WORD (.doc or .docx). Papers received after the beginning of class will be considered late and receive a 20% deduction in points per 24-hour period. If you encounter extreme emergencies or are participating in a pre-approved university-sponsored function, exceptions may be made; however, these must be discussed with me to determine if they fall in this category. I strongly encourage you to make a back-up copy of any work submitted since computers have been known to crash at the most inopportune times.

Assignment Summaries

Article Review & Research Classification (5%)
The intent of this assignment is to increase your familiarity with evidence-based peer-reviewed journal articles. Select one of the articles posted on http://courses.gmu.edu in our “Assignments” folder. Read the article thoroughly and respond to each of the following using complete sentences (bulleted responses are not acceptable for this course):
- What was the topic studied?
- What procedures were used to gather data?
- Who were the participants?
- What scales or instruments were used?
- What was the method of data analysis?
- What were the major conclusions and implications?

Introduction, Problem Statement, Lit Review, Hypothesis Variables (15%)
The intent of this assignment is to apply your curiosity, conceptual and practical understanding of health, fitness and recreation resources to asking questions and defining research problems. This assignment will benefit you in developing an awareness of research potential in your field of interest and planning for your final research proposal. Specifically, you are to write an introduction to your research proposal and your preliminary review of literature AND submit a copy of each research article used in the review. The literature review will include:
- An introduction to the specific topic to be investigated in your study (including the background and significance of the problem);
- A specific statement of the problem (which could be the last sentence in your introduction);
- An integrated review of pertinent literature (at least 5 current, evidence-based/empirical and peer-reviewed research articles – do not confuse these with articles from newspapers which are NOT empirical nor peer-reviewed);
- TWO testable hypotheses regarding the outcome of your study; and
- Identification of your independent and dependent variables and definitions in each of your hypotheses.

Sampling Plan (10%)
Having selected a problem, formulated a hypothesis and completed a preliminary literature review, DESCRIBE A SAMPLE APPROPRIATE FOR EVALUATING YOUR TWO HYPOTHESES. This assignment is to be written in proposal format and should be specific to your PROPOSED full study (NOT your Pilot Study of 20 people that will happen shortly). Include:
- A complete definition of the target and accessible populations from which the sample would be drawn. This definition should thoroughly describe the size of these populations and relevant characteristics (e.g., age, ability, socioeconomic status, etc.). This is based on your PROPOSED study.
- A description of how you will determine the sample size. Include a summary statement that indicates the sample size that will be selected and justification for this size. Be sure to identify your anticipated response rate and cite your source!
- An explanation of the procedural techniques by which you would select the sample and form it into groups (if appropriate). This technique should be described in detail, including justification of the technique selected. For example, if using “stratified sampling”, do not just say that stratified sampling will be used; indicate on what basis (i.e. characteristic) the population will be stratified and how group members (and how many) will be selected.
- Indicate the possible sources of sampling bias.
**Research Design, Measurement & Data Collection (15%)**
The intent of this assignment is to continue development of the research proposal, specifically identifying the research design to be used, measurement tools available and detailing the data collection procedures. Having selected a problem, formulated a hypothesis, completed a preliminary literature review, and described your population and sample, **IDENTIFY THE MEASURES AND DATA COLLECTION PROCEDURES TO BE USED IN THIS STUDY AND DESIGN AN APPROPRIATE COVER LETTER AND SURVEY INSTRUMENT.** This assignment is to be written in proposal format (with cover letter and instrument in appendices). You are to address the following:

**Measurement, Design and Data Collection**
I. Briefly explain the sources for questions to be used in the survey and how you would validate and confirm the reliability of your instrument. In other words, if you plan to use one or more already existing scales or measures, describe each. Explain, as well, how you plan to check the validity and reliability of scores obtained with your instruments. If you plan to use an existing instrument, summarize what you have been able to learn about the validity and reliability of previous results.

II. Identify and describe the research design to be used in this study (go back to your reading on “Research Designs”). Describe why the design was selected; potential threats to internal validity (e.g., subject characteristics, location, instrumentation, maturation, subject attitude, implementation) and how you have designed the study to minimize the potential effects of these threats.

III. Describe the procedural technique(s) by which you would collect the data for a complete study (e.g., structured face-to-face or telephone interviews; mail, fax or email surveys; pre/post). The specific data collection technique(s) should be described in detail (when, where, how long, etc.). Indicate the exact procedures for how you will make contact with subjects and the advantages and disadvantages of your chosen method of collection. Justify why you selected the technique you did.

IV. Identify any possible ethical problems in carrying out such a study and how the problems could be remedied. Be sure to include: possible harm to participants (if any); possible problems of confidentiality (if any); and possible problems of deception (if any).

**Instrument and Cover Letter Development**
Develop an appropriate cover letter written to your theoretical participants that will reference the collection procedures you have determined. This letter must include, but is not limited to the following:

a. Letterhead, date, name and address, greeting, signature and title;

b. What the study is about and why it is useful;

c. Why the recipient is important and why they should complete your questionnaire;

d. A promise of confidentiality or anonymity and an explanation of a numbering system if used; and,

e. Assurance that the information will be used, incentives that will be given, if appropriate, and a thank you.

**Analysis Plan (10%)**
The intent of this assignment is to develop a plan for analysis of survey data. Having developed a survey instrument by which to collect your data (Assignment #4), you are to conduct a pilot study and write about it. Specifically, you are to:

I. Distribute your questionnaire to 20 people [similar to those you hope to study] and input the data in SPSS.

II. Analyze all variables using appropriate descriptive statistics and write up the results. In this case, you will be analyzing more than just the variables you are using to test your hypothesis. You should provide at least 2 Tables and 1 Figure accompanying your data descriptions. In your text, highlight the key information in those Tables/Figures.

III. Develop a plan for inferential analysis of survey data (you don’t have to write about the inferential results yet, – save that for the final Proposal & Presentation). Include a discussion of the appropriate statistics and variables to be used to assess your hypothesis. It would also be appropriate to plan some inferential analyses of variables that would be interesting to your “stakeholders”, i.e. the people who would be interested in your data.
Research Presentation & Handout (10%)  
The intent of this assignment is for you to share your research proposal with your colleagues via a 10-minute PowerPoint presentation. This assignment will allow you to gain experience in oral presentation skills and will help to improve your final written proposal. As part of our experience, we (your colleagues & I) will offer summary critiques of your presentations and may ask questions about your study.  
• Introduce the topic, research problem and its significance to theory and practice (including reference to pertinent literature)  
• Identify your two hypotheses and the relevant variables  
• Identify the potential limitations and delimitations of this proposed study  
• Define the population of interest and how your proposed large sample will be drawn (i.e., size of sample, method of sampling)  
• Describe the results of your pilot study  
• Discuss the potential results and implications of your pilot study findings  

Final Research Proposal (20%)  
The intent of this assignment is for you to apply your conceptual and practical understanding of your research topic to prepare a final and complete research proposal. Your proposal should illustrate your familiarity with problem formulation and hypothesis development, review and critical analysis of the scholarly literature related to your study, justification of appropriate methodology, and consideration of the implications of your research. This assignment is a revision and extension of all content included in previous assignments.  

SPECIAL NOTE: Because the data we collect for our pilot study is for educational purposes only (i.e. we share our results as part of our process to understand research), we do not complete the Human Subject’s Review Board application. Therefore, the data we collect in this course may not be presented in any context other than this course. However, if you wish to use these data for a conference presentation or as the foundation for a research process, please let me know and I will be happy to work with you to obtain approval from Mason’s HSRB.  

• 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.  
• 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].
**COURSE SCHEDULE:**

<table>
<thead>
<tr>
<th>WEEK</th>
<th>TOPIC</th>
<th>READINGS/ASSIGNMENTS</th>
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<tbody>
<tr>
<td>Week 1</td>
<td>Introduction to PRLS 450, Research, &amp; Research Topics&lt;br&gt;Developing Research Topics</td>
<td>Step 1: Decide on a Topic</td>
</tr>
<tr>
<td>Week 2</td>
<td>Using our resources to conduct effective literature reviews&lt;br&gt;Hypotheses &amp; Variables (Bring RQs to class)</td>
<td>Step 2: Review the Literature&lt;br&gt;Step 3: Identify Theoretical Underpinnings&lt;br&gt;Journal Article Review DUE</td>
</tr>
<tr>
<td>Week 3</td>
<td>Pulling together literature for your review&lt;br&gt;Research Plan &amp; Ethics&lt;br&gt;(Students complete CITI training)</td>
<td>Step 4: Develop a Scope of Study&lt;br&gt;Step 10: Address Ethical Responsibilities&lt;br&gt;Complete CITI Training at <a href="http://research.gmu.edu/ORSP/HumanTraining.html">http://research.gmu.edu/ORSP/HumanTraining.html</a> (click on “Mandatory Training...”)&lt;br&gt;Journal Article Review DUE</td>
</tr>
<tr>
<td>Week 5</td>
<td>Sampling&lt;br&gt;Instrumentation</td>
<td>Step 7: Choose a Design&lt;br&gt;Intro/Literature Review DUE</td>
</tr>
<tr>
<td>Week 6</td>
<td>Instrument &amp; Measurement</td>
<td>Step 8: Consider Measurement&lt;br&gt;Step 9: Specify Data-Collection Tools</td>
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<tr>
<td>Week 7</td>
<td>Reliability &amp; Validity&lt;br&gt;Qualitative Research</td>
<td>Step 12: Conduct a pilot test&lt;br&gt;Step 14B: Analyze qualitative data&lt;br&gt;Sampling Plan DUE (plus revised Lit Review – as ONE document)</td>
</tr>
<tr>
<td>Week 8</td>
<td>Descriptive Statistics&lt;br&gt;Data entry (Meet in 250 BRH – bring questionnaires)</td>
<td>Finish collecting data</td>
</tr>
<tr>
<td>Week 9</td>
<td>Inferential Statistics&lt;br&gt;Analysis of data in lab (Meet in 250 BRH)</td>
<td>Methods Paper DUE (plus revised Sample &amp; Lit Review – as ONE document)</td>
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<tr>
<td>Week 10</td>
<td>Inferential Analysis wrap-up&lt;br&gt;Lab Day (Meet in 250 BRH)</td>
<td>Draw names for presentation dates</td>
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<tr>
<td>Week 11</td>
<td>Data Analysis Workshop – let’s talk through your findings&lt;br&gt;Interpreting Results</td>
<td>Step 15: Present Results Using Visual Aids&lt;br&gt;Analysis Plan DUE (plus revised Methods, Sample, &amp; Lit Review – as ONE document)</td>
</tr>
<tr>
<td>Week 12</td>
<td>Lab Time (meet in 250 BRH – work on your own)&lt;br&gt;Results – Meanings &amp; Sample Presentation</td>
<td>Step 16: Deliver an Oral Report</td>
</tr>
<tr>
<td>Week 13</td>
<td>Final Discussion of relationships &amp; class wrap-up&lt;br&gt;First Presentations</td>
<td>All Presentations are DUE today on a USB drive</td>
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<tr>
<td>Week 14</td>
<td>Presentations</td>
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<tr>
<td>Week 15</td>
<td>Presentations</td>
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*Note: Faculty reserve the right to revise the course schedule.*