| Program | BS Physical Education | Course Code | PE-306 | Credit Hours | 01 |
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| **Course Title** | **Research Methodology in Physical Education (Practical)** | | | | |

**Course Introduction**

This course provides a comprehensive understanding of research methodologies and their applications in physical education and sports sciences. It covers the entire research process, including formulating research questions, literature review, research design, data collection and analysis, and presenting and interpreting research findings.

**Learning Outcomes**

On the completion of the course, the students will:

- Understand the fundamental concepts of research methodology.
- Formulate research questions and hypotheses.
- Conduct a thorough literature review.
- Design and implement various types of research studies.
- Collect, analyze, and interpret quantitative and qualitative data.
- Present research findings clearly and effectively.
- Critically evaluate research articles and studies in physical education and sports sciences.

| | Course Content | Assignments/Readings |
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| Week 1 | **Introduction to Research in Physical Education**<br>• Lecture on the basics of research, including qualitative and quantitative methods.<br>• Group discussion on the importance of research in physical education.<br>• Case study analysis of significant research studies in the field | From Books and Class Lectures |
| Week 2 | **Identifying Research Problems and Formulating Hypotheses**<br>• Practical exercise on brainstorming and identifying research problems.<br>• Workshop on formulating clear and testable hypotheses.<br>• Group activity to critique and improve research questions and hypotheses | From Books and Class Lectures |
| Week 3 | **Literature Review and Research Proposal Writing**<br>• Practical session on searching academic databases and identifying relevant literature. | From Books and Class Lectures |

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| | • Hands-on exercise to summarize and synthesize literature findings.<br>• Workshop on writing and structuring a research proposal | |
| Week 4 | **Research Design and Methodology**<br><br>• Lecture on various research designs (e.g., experimental, descriptive, correlational).<br>• Group activity to match research questions with appropriate designs.<br>• Practical exercise on developing a detailed research methodology section | From Books and Class Lectures |
| Week 5 | **Revision of**<br><br>**Introduction to Research in Physical Education**<br><br>• Lecture on the basics of research, including qualitative and quantitative methods.<br>• Group discussion on the importance of research in physical education.<br>• Case study analysis of significant research studies in the field<br>**Identifying Research Problems and Formulating Hypotheses**<br><br>• Practical exercise on brainstorming and identifying research problems.<br>• Workshop on formulating clear and testable hypotheses.<br>• Group activity to critique and improve research questions and hypotheses<br>**Literature Review and Research Proposal Writing**<br><br>• Practical session on searching academic databases and identifying relevant literature.<br>• Hands-on exercise to summarize and synthesize literature findings.<br>• Workshop on writing and structuring a research proposal<br>**Research Design and Methodology**<br><br>• Lecture on various research designs (e.g., experimental, descriptive, correlational).<br>• Group activity to match research questions with appropriate designs. | |

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| | Practical exercise on developing a detailed research methodology section | |
| Week 6 | **Sampling Techniques and Data Collection**<br>• Practical session on sampling methods (e.g., random, stratified, convenience).<br>• Hands-on exercise on designing data collection tools (e.g., surveys, observation checklists).<br>• Workshop on ensuring reliability and validity in data collection | From Books and Class Lectures |
| Week 7 | **Data Analysis and Interpretation**<br>• Practical session on using statistical software (e.g., SPSS, Excel) for data analysis.<br>• Hands-on exercise on coding and analyzing qualitative data.<br>• Workshop on interpreting results and drawing meaningful conclusions | From Books and Class Lectures |
| Week 8 | **Writing the Research Report**<br>• Lecture on the components of a research report (e.g., introduction, methods, results, discussion).<br>• Practical session on writing different sections of the research report.<br>• Group activity to peer-review and provide feedback on research reports | From Books and Class Lectures |
| Week 9 | **Ethics in Research**<br>• Lecture on research ethics and the role of institutional review boards (IRBs).<br>• Group discussion on ethical dilemmas and case studies in research.<br>• Practical exercise on preparing and submitting an ethics application | From Books and Class Lectures |
| Week 10 | **Revision of**<br>**Sampling Techniques and Data Collection**<br>• Practical session on sampling methods (e.g., random, stratified, convenience).<br>• Hands-on exercise on designing data collection tools (e.g., surveys, observation checklists).<br>• Workshop on ensuring reliability and validity in data collection | |

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| | **Data Analysis and Interpretation**<br>• Practical session on using statistical software (e.g., SPSS, Excel) for data analysis.<br>• Hands-on exercise on coding and analyzing qualitative data.<br>• Workshop on interpreting results and drawing meaningful conclusions<br>**Writing the Research Report**<br>• Lecture on the components of a research report (e.g., introduction, methods, results, discussion).<br>• Practical session on writing different sections of the research report.<br>• Group activity to peer-review and provide feedback on research reports<br>**Ethics in Research**<br>• Lecture on research ethics and the role of institutional review boards (IRBs).<br>• Group discussion on ethical dilemmas and case studies in research.<br>Practical exercise on preparing and submitting an ethics application | |
| Week 11 | **Presentation of Research Findings**<br>• Practical session on creating visual aids (e.g., graphs, charts, posters).<br>• Workshop on developing and delivering oral presentations.<br>• Group activity to present research findings and receive feedback | From Books and Class Lectures |
| Week 12 | **Peer Review and Critique**<br>• Practical session on the peer review process and criteria for evaluation.<br>• Group activity to review and critique research proposals and reports.<br>• Workshop on providing constructive feedback | From Books and Class Lectures |
| Week 13 | **Research in Action: Case Studies**<br>• Practical session on analyzing case studies and identifying research methods used.<br>• Group discussion on the implications of research findings for practice. | From Books and Class Lectures |

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| | • Workshop on developing action plans based on case study analyses | |
| Week 14 | **Practical Assessment and Feedback**<br>• Practical assessment of research skills, including proposal writing, data collection, and analysis.<br>• Peer and instructor feedback sessions.<br>• Reflection on learning experiences and setting goals for future research | From Books and Class Lectures |
| Week 15 | **Revision of**<br>**Presentation of Research Findings**<br>• Practical session on creating visual aids (e.g., graphs, charts, posters).<br>• Workshop on developing and delivering oral presentations.<br>• Group activity to present research findings and receive feedback<br>**Peer Review and Critique**<br>• Practical session on the peer review process and criteria for evaluation.<br>• Group activity to review and critique research proposals and reports.<br>• Workshop on providing constructive feedback<br>**Research in Action: Case Studies**<br>• Practical session on analyzing case studies and identifying research methods used.<br>• Group discussion on the implications of research findings for practice.<br>• Workshop on developing action plans based on case study analyses<br>**Practical Assessment and Feedback**<br>• Practical assessment of research skills, including proposal writing, data collection, and analysis.<br>• Peer and instructor feedback sessions.<br>Reflection on learning experiences and setting goals for future research | |
| Week 16 | **Review and Final Exam Preparation**<br>• Review of key concepts and principles | From Books and Class Lectures |

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| | • Mock exams and practice questions<br>• Final exam preparation | |

**Textbooks and Reading Material**

**Textbooks**


- Creswell, J. W., & Creswell, J. D. (2018). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (5th ed.). Sage Publications.
- Gratton, C., & Jones, I. (2014). Research Methods for Sports Studies (3rd ed.). Routledge.
- Patton, M. Q. (2014). Qualitative Research & Evaluation Methods (4th ed.). Sage Publications.
- Thomas, J. R., Nelson, J. K., & Silverman, S. J. (2015). Research Methods in Physical Activity (7th ed.). Human Kinetics.