

Semester III
Theory Course
IMTC 302-RESEARCH PROCESS IN PHYSICAL EDUCATION
AND SPORTS SCIENCES

ESSENCE OF THE COURSE

This course will enable students to understand the modern concept of research in physical education and sports. It aims to develop understanding about the need and importance of research in physical education and sports, research problem, survey of related literature.

COURSE LEARNING OUTCOME

After completing this course, the students will be able to

-) Understand the basic framework of research process.
-) Understand the classification of research.
-) Describe the research process.
-) Identify various sources of information for literature review and data collection.
-) Know how to organize, manage, and present data.
-) Use and apply a wide variety of specific statistical methods.
-) Formulate research problem.
-) Construct of tables and graphs.
-) Search literature reviews.
-) Understand statistical models used in physical education and sports.

COURSE CONTENTS

12.1 UNIT I

Meaning and Definition of Research – Need, Nature and Scope of research in Physical Education. Classification of Research; Basic Research, Applied Research, Action Research, Location of Research Problem – Criteria for selection of a problem. Qualifies of a good researcher.

12.2 UNIT II

Definition of Historical Research – Steps in Historical Research – Sources of Historical Research. Primary Data – Secondary Data – Historical Criticism; Internal Criticism External Criticism. Descriptive Methods of Research; Survey Study – Case study – Normative Study.

12.3 UNIT II

Meaning and Definition of Hypothesis. Formulation of Hypothesis. Experimental Methods of Research; Meaning of variable – Types of Variables – Nature and meaning of experimental Research. Types of Experimental Design; Single Group Design, Reverse Group Design, Repeated Measure Design, Static Group Comparison Design, Equated Group Design, Factorial Design.

12.4 UNIT IV

Meaning and Definition of Sample and Population. Types of Sampling; Probability Methods; Systematic Sampling, Cluster sampling, Stratified Sampling. Area Sampling – Multistage Sampling. Non- Probability Methods; Convenience Sample, Judgement Sampling, Quota Sampling. Chapterization of Thesis / Dissertation; Front Materials, Body of Thesis – Back materials. Method of Writing Research proposal, Thesis /

Dissertation; Method of writing abstract and full paper for presenting in a conference and to publish in journals – Mechanics of writing Research Report – Footnote and Bibliography writing.

TEACHING LEARNING STRATEGIES

-) The content of the syllabus may be taught by using lecture method, discussion method, quiz method, educational videos, movement analysis of different sports skill through virtual skills of different sports and games (movement patterns from You tubes and famous sports videos of sports skills/techniques) human skeleton/system model (3D anatomy and 3D physiology software and virtual Video), charts and assignment method depending upon the resources and facilities available at the University/Institute/ Department/Colleges.

MODE OF TRANSACTION

-) Field Work/Project Work/Viva/Seminars/Term Papers/Presentations/Self- Learning Instructional Material etc.

ASSESSMENT RUBRICS

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|) End Semester Exam | Marks: 50 |
|) Classroom Test, Project Work, Assignments, Presentations | Marks: 35 |
| o Classroom Tests: Best one out of two unit tests | Marks: 15 |
| o Project Work, Assignments, Presentations | Marks: 5 |
| | Marks: 10 |

REFERENCE:

1. Best J. W (1971) Research in Education, New Jersey; Prentice Hall, Inc
2. Clarke David. H & Clarke H, Harrison (1984) Research processes in Physical Education, New Jersey; Prentice Hall Inc.
3. Craig Williams and Chris Wragg (2006) Data Analysis and Research for Sport and Exercise Science, Londonl Routledge Press
4. Jerry R Thomas & Jack K Nelson (2000) Research Methods in Physical Activities; Illonosis; Human Kinetics;
5. Kamlesh, M. L. (1999) Reserach Methodology in Physical Education and Sports, New Delhi
6. Moses, A. K. (1995) Thesis Writing Format, Chennai; Poompugar Pathippagam
7. Rothstain, A (1985) Research Design and Statistics for Physical Education, Englewood Cliffs: Prentice Hall, Inc
8. Subramanian, R, Thirumalai Kumar S &Arumugam C (2010) Research Methods in Health, Physical Education and Sports, New Delhi; Friends Publication