

## PH. D COURSE WORK IN PHYSICAL EDUCATION

( AS PER CREDIT SYSTEM W.E.F. THE SESSION JANUARY 2017)

### Program Specific outcome

PSO 1: Students would gain conceptual and theoretical knowledge of research methodology in the field of Physical Education and would apply them in research of Sports and Physical Education.

PSO 2: Student would understand the application of Sports Psychology, Sports Management and Sports Bio Mechanic and would be able to apply them in their professional areas.

PSO 3: Student would become competent enough and would acquire the advance skill of Physical Education profession.

### SCHEME OF EXAMINATION

The entire course will be of two semester. Each student should earn a minimum of 28 credits over the entire course (Course - 20 + Dissertation- 8= 28 )

#### Semester I

Paper Code	Nomenclature	Hours/ Week( L+T+P)	Marks			Exam. (hrs)	Credit L+T+P
			Int .	Ext.	Total		
17PHEMP11C1	Research Methodology	4+0+0	80	20	100	3 hrs	4+0+0=4
17PHEMP11C2	Statistics in Physical Education	4+0+0	80	20	100	3 hrs	4+0+0=4
17PHEMP11C3	Computer Applications in physical Education	4+0+0	80	20	100	3 hrs	4+0+0=4
<b>Credits</b>						<b>Total credits =12</b>	

**INTERNAL ASSESSMENT:** Each student will be required to appear in the Internal Assessment Test which will be taken by the concerned teacher. The test will be held 10 marks in each semester of each paper. In addition to it, the students will be required to submit one assignment in each paper which will be evaluated by the concerned teachers. Each assignment will carry 5 marks and 5 marks will be for attendance.

- Ph.D Student would gain conceptual and theoretical knowledge of research methodology and would apply that while conducting the research and writing the thesis of Ph.D.
- Students would able to identify the variables of sports proctology, sports management and sports Bio-mechanics while selecting the topic and writing the thesis of Ph.D in Physical Education and sports.
- Students would become highly competent and would be more skilful in the area of Physical Education and Sports.

**Paper-I RESEARCH METHODOLOGY**  
**17PHEMP11C1**

Time – 3 hours

Max. Marks = 100  
External marks: 80  
Internal marks: 20

**COURSE OUTCOMES**

CO 1: The students would be able to understand the concept of research

CO 2: The students would be able to define meaning, nature, scope, and purposes of Research in physical education and sports.

CO 3: The students would be able to understand the types and methods of research in physical education and sports.

CO 4: The students would be able to illustrate meaning, criteria and sources for identifying the research problems.

CO 5: The students would be able to describe the importance and various sources of review of related literature and hypothesis & sampling.

**UNIT –I**

**RESEARCH**

- Meaning, Need, Nature and scope of Research in Physical Education
- Characteristics of a good research
- Fundamental, applied and action research

**REVIEW OF LITERATURE**

- Importance, location of the research material – index, books, bibliography, reviews and abstract, critical literature and allied literature
- Steps in reviewing literature
- Not taking, scanning and skimming,

**UNIT-II RESEARCH PROBLEM**

- Identification of area for research in Physical Education
- Selection of problem
- Delimitation and operationalization of variables

**HYPOTHESIS**

- Meaning and Importance
- Characteristics of good hypothesis
- Sources (iv) Types of hypothesis

**UNIT-III**

**METHODS OF RESEARCH**

- Historical
- Descriptive
- Experimental
- Philosophical

**RESEARCH DESIGN**

- Meaning of research design and its importance
- Type of research design

**UNIT-IV**

**SAMPLING**

- Concept of population and sample
- Method of sampling : Probability and non-probability

**TOOLS & TECHNIQUES**

- Characteristics of a good research tools
- Questionnaire, Interview, Observation, Psychological Test, Sociometric Techniques, Attitude Scale, Inventories

**REPORT WRITING**

- Developing research proposal (synopsis)
- Characteristics of a good research report

- General format of a research report

## REFERENCE

1. Aggarwal, Y.P. (1998) The Science of Educational Research, A Source book, Nirmal, Kurukshetra.
2. Garrett, H.E. (1973), Statistics in Psychology and Education Vakils, Feffer and Simon, Bombay.
3. Good: C.V. and Douglas, E.Scates 1954, Methods in Social Research, Mcgraw Hill, New York.
4. Kou, Lokesh (1988), Methodology of Research, Vikas, New Delhi.
5. Mouly, A.J. (1963), The Science of Educational Research Euroasia, New Delhi.

## **Paper-II STATISTICS IN PHYSICAL EDUCATION 17PHEMP11C2**

Time – 3 hours

Max. Marks = 100

External marks: 80

Internal marks: 20

## **COURSE OUTCOMES**

CO 1: The students would be able to differentiate different types of data i.e. Quantitative data & Qualitative data.

CO 2: The students would be able to do practical orientation involving selection of appropriate data analysis techniques.

CO 3: The students would be able to explain and illustrate the concept & application of measures of central tendency dispersion and relative positions.

CO 4: The students would be able to describe the meaning, assumptions, computation & uses of T-Test, ANOVA & NPS

CO 5: The students would be able to differentiate between parametric test & non-parametric test.

## **UNIT-I**

### **STATISTICS**

- Meaning and importance in Physical Education

### **DATA**

- Method of organizing data through frequency distribution

### **MEASURE OF CENTRAL TENDENCY (meaning and computation)**

- Mean, Median, Mode.

## **UNIT-II**

### **MEASURES OF DISPERSION (Meaning & Computation)**

- Range
- Quartile Deviation
- Average Deviation
- Standard Deviation

### **MEASURES OF RELATIVE POSITION**

- Meaning & Computation
- Percentile

- Percentile rank

### **UNIT-III**

#### **NORMAL PROBABILITY CURVE**

- Meaning
- Characteristics
- Application
- Skewness and Kurtosis

#### **CORRELATION**

- (Meaning uses and computation)
- Product Moment Correlation Rank Difference Correlation (a) Partial and Multiple (b) Phi and Tetrachoric

### **UNIT-IV**

#### **ANALYSIS OF VARIANCE**

- Meaning, Assumption and Computation (a) One way Anova (b) Two way Anova

#### **CHI-SQUARE**

- tests of equality and Independence (Meaning, Assumption and Computation)

#### **T -TEST:**

- Significance of difference between two means (independence samples)

#### **REFERENCE**

1. Siegel, S. (1986), Non-parametric Statistic, Mcgraw Hill, New York.
2. Van Dalen, D.B., (1992), Understanding Educational Research, McGraw Hill, New York.
3. Garrett, H.E. (1973), Statistics in Psychology and Education Vakils, Feffer and Simon, Bombay.

### **PAPER-III**

#### **Computer Applications in Physical Education 17PHEMP11C3**

**Max. Marks: 80**

**Int. Marks: 20**

**Time: 3 hours**

### **COURSE OUTCOMES**

CO 1: The students would be able to understand the basics & types of computer and aware about fundamentals of computer hardware and software.

CO 2: The students would be able to familiar with Net working & Internet.

CO 3: The students would be able to understand and able to use of different types of application software i.e. MS-word, MS-Excel etc.

CO 4: The students would be able to develop understanding about E-Book and Virtual library.

CO 5: The students would be able to analyze the concept of plagiarism.

#### **UNIT-I**

- Definition of Computer, Block diagram of computers, classification of computers, role of computer in Physical Education.
- Components of Computer  
Hardware {CPU, Monitor, Keyboard etc.)  
Software (DOS, Basic, Colbol}

#### **UNIT-II**

- What is an OS? Functions of an OS?
- OS as a resource manager, Types of OS, Features of OS, Concepts of warm & Cold booting,

swapping, spooling and buffering.

### **UNIT-III**

#### **MS-office and data Analysis Software**

- Word-Introduction of word processor, creating & saving documents.
- Excel- Introduction to excel, need of spreadsheet, creating, opening & saving workbook, editing worksheet, using links, applying different views, Types of functions.
- Power Point-Introduction of slides, speaker notes, media clips, graphs, picture, web pages, adding different kind of slides, working with Power Point, inserting text objects, formatting Text.
- Introduction to Data analysis software SPSS & application of t-test, Chi square and Anova through SPSS Soft-ware.

### **UNIT-IV**

- Introduction
- Evaluating internet resources: Authority, Accuracy and objectivity.
- Brief note on e-books and virtual library.
- UGC-infonet, INFLIBNET and ERNET.
- What is Plagiarism and how to avoid it?