



**Avinashilingam Institute for Home Science and Higher Education for Women**

(Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956)

Re-accredited with 'A' Grade by NAAC. Recognised by UGC Under Section 12 B

Coimbatore - 641 043, Tamil Nadu, India

## **Department of Physical Education**

### **Syllabus**

#### **Ph.D (Part Time & Regular)**

*2020 – 2021 Onwards*



**Avinashilingam Institute for Home Science and Higher Education for Women**  
**Coimbatore – 641 043**  
**Department of Physical Education**  
**Ph.D in Physical Education**

**Ph.D Programme specific Outcomes**

1. Approach for solving research problems by systematic understanding and identifying the globalized issues and its impact on Physical Education and Sports.
2. Motivate the researcher to create an interest in planning and implementing of research ideas to the society.
3. Fostering motivational attitude to the physical education healthy lifestyle and regular exercising to procure physical culture.

**Scheme of Instruction and Examination**

(Applicable for Ph.D Scholars admitted from 2020 – 2021 onwards)

Subject Code	Name of the Paper/ Component	Hours of Instruction	Scheme of Examination			
20PHPE01	Research Methodology and Advanced Statistics in Physical Education	7	3	60	40	100
20PHPE02	Modern Trends in Physical Education	7	3	60	40	100
20PHPE03	Specialization Paper	7	3	60	40	100
20PHRP04	Research and Publication Ethics	30	3	60	40	100
	Thesis			100	100	200

## Research Methodology and Advanced Statistics in Physical Education

Semester I

Hours of instruction / Week : 7

20PHPE01

### Objectives

- Gain knowledge about research and statistics
- To testing the existing theories/trainings and modifying
- To develop systematic and scientific approach
- Ability to interpret the data's

### Unit-I Introduction to Research Methodology

Meaning of Research - Objectives of Research – Motivation in Research – Types of Research – Research Approaches – Significance of Research – Scope of Research in Physical Education and Sport, Classification of Research, Criteria of Good Research, Research Problem, Meaning, Location and Criteria of Selection of Problem, Formulation of a Research Problem, Limitations and Delimitations - Problems Encountered by Researchers in India. **20**

### Unit-II Types of Research

**Philosophical Research:** Meaning of Philosophical method – Pitfalls in Philosophical Research - Philosophical and Historical Research

**Survey Research:** Survey by questionnaire – Interview Survey – Case Studies – Profiles – Sampling - Types of Surveys, Selecting the survey method, constructing the survey, Interviews. **20**

**Experimental Research:** Features of a good research design, Types and Uses of research design - Experimental Designs.

**Research writing:** Writing a Research proposal – Preparation of the Research Report – Arrangement of all chapters with Stylistic elements – formatting of Report.

### Unit III Basics of Statistics

Statistics- Meaning, Definition, Nature and Importance. Measures of Central Tendency- Mean, Median and Mode-Meaning, Definition, Importance, Advantages, Disadvantages and Calculation from Group and Ungrouped data. Measures of Variability- Meaning, importance, computing from group and ungroup data. Percentiles and Quartiles- Meaning, importance, computing from group and ungroup data **20**

### Unit IV Correlation

Class Intervals- Raw Score, Continuous and Discrete Series, Class Distribution and Construction of Tables. Graphical Presentation of Class Distribution- Histogram, Frequency Polygon, Frequency Curve, Cumulative Frequency Polygon, Ogive, Pie Diagram - “T” ratio, Advantages of “T” ratio - Person product moment correlation – Rank order correlation – biserial correlation – partial and multiple correlation, phi correlation – chi square – contingency coefficient. **20**

### Unit V Analysis of Variance

Simple analysis of variance (one way ANOVA)- factorial design – two way and three way factorial design – repeated measures ANOVA – two way ANOVA – two way ANOVA with one factor repeated ANOVA-post hoc tests. Application of Ms Excel and SPSS for Statistical Calculations - Concepts of multivariate ANOVA and ANCOVA (MANOVA, MANCOVA) **25**

**Course outcomes:**

1. Identify the research problem in the field of physical Education and sports
2. Know to Summarize the various research literature
3. Understand and apply the basics of statistics in research.
4. Organize the samples and sampling techniques which is relevant to the study.
5. Apply the basics of statistics in minor research project for evaluation

**Text Books:**

1. Best, J. W., & Kahn, J. V. (2016). Research in education. Pearson Education India.
2. Metzler, M. (2017). Instructional models in physical education. Taylor & Francis.
3. Thomas, G. (2017). How to Do Your Research Project: A Guide for Students. Sage.

**Reference Books:**

1. Carter, R., & Lubinsky, J. (2015). Rehabilitation Research-E-Book: Principles and Applications. Elsevier Health Sciences.
2. Ary, D., Jacobs, L. C., Irvine, C. K. S., & Walker, D. (2018). Introduction to research in education. Cengage Learning.
3. Hoy, W. K., & Adams, C. M. (2015). Quantitative research in education: A primer. Sage Publications.

**Web Links:**

1. <https://www.uia.no/en/studieplaner/topic/IDR202-1>
2. [www.etk.pt.hu/protected/OktatasiAnyagok/.../sport2/ResearchMethodology\\_eK.pdf](http://www.etk.pt.hu/protected/OktatasiAnyagok/.../sport2/ResearchMethodology_eK.pdf)
3. [www.humankinetics.com/products/.../research-methods-in-physical-activity-7th-edition](http://www.humankinetics.com/products/.../research-methods-in-physical-activity-7th-edition).
4. [www.khelsahitya.com/research-statistics-in-physical-education-3508405.html](http://www.khelsahitya.com/research-statistics-in-physical-education-3508405.html)

## Modern Trends in Physical Education

Semester I

Hours of instruction / Week : 7

20PHPE02

### Objectives

- Understand physical education as more diversified and systematized process
- Develop competencies, skills and knowledge required for the fitness management
- Advanced understanding and demonstration of teacher professionalism and ethical behaviors in sport pedagogy.

### Unit-I Professional Preparation

Teacher Training Programme in India –Diploma Course, Certificate Course, Under Graduate Course-Post Graduate Course-Higher Education (research degrees) Comparison of Different Course Contents - professional organization in India and other countries. 20

### Unit-II Government Schemes and Career Opportunities In Physical Education

National Institute of Sports, Youth Hostel, Youth Festival, Rajkumari Amrit Kaur Coaching Scheme, Sports Authority of India, National Awards for Sports Persons and Coaches, Moulana Abdul Kalam Azad Trophy, Sports Talent Search Scholarship. Avenues of Placements-Government, Non-Government, And Public Sector. 20

### Unit III Technology in Physical Education

Uses of Technology in Learning Physical Education: Computer, Internet, Chat through the Internet, Video conferencing. Promoting Physical Activity Using Technology, New and Emerging Technology and Applications, Importance of Devices and Methods of Teaching. 20

### Unit IV Research article writing skills

Presentations of review of research articles in chosen areas - Analyzing and understanding styles and formats of articles in referred national and international journals - Abstract, keywords, footnote and citation styles in articles-cross reference-preparation of articles for magazines. 25

### Unit V Future Trends in Physical Education

Issues and Challenges in Physical Education and Sports – Public Relations. Future Challenges in Physical Education personnel in Organization and administration. 20

### Course outcomes:

1. Plan, develop, communicate, implement, and evaluate technology-infused strategic plans.
2. Find out how successful were the teachers' efforts in contributing to the realization of the fundamental objectives of Physical Education.
3. Analyze the concepts and issues pertaining to Physical Education.
4. Create Psychological and Sociological aspects of the profession
5. Explain the contemporary issues and topics pertaining to Physical duration.

**Text Books:**

1. Clarke David.H and Clarke H, Harrison (1984) research processes in physical education, new jersey: Prentice hall inc.,
2. Best, John W. and Kalm james, V.(1980) research in education, new delhi: Prentice hall of India.
3. Clarke, H. Harrison and Clarke david H.(1972) advanced statistics, new jerky: Prentice hall inc.
4. Thomson AI(1986) The art of using computers, boyd & frasher boston: Publishing co.,

**Reference Books:**

1. Jess, M. & Collins, D. (2003). Primary physical education in Scotland: the future in the making. *Mosby Company. St.Louis.*
2. Jess, M., Dewar, K. & Fraser, B. (2004). Basic Moves: Developing a Foundation for Lifelong Physical Activity.
3. Jones, A & Moreland, J. (2005). The importance of pedagogical content knowledge in assessment for learning practices. Mosby Company. St.Louis.

**Web Links:**

1. <https://books.google.com> › Sports & Recreation › General
2. <https://books.google.com> › Health & Fitness › Exercise
3. <https://academic.oup.com/ije/article/30/.../Physical-activity-and-health-current-issues>

## Department of Physical Education

### Ph.D (Specialization Papers)

#### SPORTS TRAINING

Semester I  
20PHPE03A

Hours of instruction / Week : 7

#### Objectives

- To improve their work as physical education teachers and coaches
- To train athletes and teams appropriately to their age in the selected sports discipline or - as a conditional coach
- To apply the acquired and in-depth knowledge as well as their methodical competences for research purposes
- To analyse development tendencies in their selected sports discipline and to take this into consideration when planning their own training process

#### Unit-I Introduction to Sports Training

Sports training aims- task and characteristics of sports training- Principles of sports training-Methods of training: weight training – isotonic, isometric- Isokinetic interval training, circuit training – fartlek training. 20

#### Unit-II - Training Load

Introduction - Definition- components of training load- intensity, density, duration and frequency principles of training load- adoption of load – principles of over load- Effects of training on physiological systems- muscle, heart – oxygen Consumption-blood lactate- lung capacity- work capacity-body composition 20

#### Unit III – Motor Components : Strength, Endurance, Speed, Flexibility, and Coordination

Forms of Motor Components- Characteristics of Motor Components - means and methods of developing Motor Components. 20

#### Unit IV - Technical and Tactical Preparation

**Technical preparation** – fundamentals and methods for the development of techniques in sports – stages of technical development – causes and correction of faults. 20

**Tactical preparation** – Tactical concepts – methods of tactical development

**Training Plan**- Periodisation– single, double and triple periodisation (preparatory period), pre competition period, competition season(competition period), off season (transitional period), long term plan, short term plan – micro cycle, meso cycle, (sports testing and monitoring of load with respect to the concerned meso cycle), macro cycle - training schedules - steps involved in preparation schedule.

**Psychological preparation**- Autogenic training– individual differences – requirement – diet for different season

#### Unit V – Nutritious Diet

Introduction-Definition-Principles of Nutrition- Forms of Nutrients and its functions in the body-Basic Nutrients: Carbohydrates, Proteins, Fats, Minerals, Vitamins, and Water - 25  
Sources of Nutrients-Balanced Diet- Caloric requirements for various sports.

**Course outcomes:**

1. Design and implement a team sport practice session for healthy populations.
2. Observe and evaluate coaching styles, including coaching objectives and philosophy.
3. Apply current research and industry standards to programs that develop skill-related health and fitness in athletes.
4. Utilize and enhance team sports programming and teaching strategies learned through critical analysis of professionals in the industry.
5. Make recommendations for enhancing the training effect after analysing sports training plans.

**Text Books:**

1. Singh Hardayal(2011). Sports Training: General Theory and methods. National Institute of Sports, 7<sup>th</sup> ed., Patiala
2. Wilmore J.H (2012). Athletic Training and Physical Fitness. Allyn and Bacon Inc, 9<sup>th</sup>ed. n Sydney.
3. Bompa, T., & Buzzichelli, C. (2015). Periodization Training for Sports, 3E. Human kinetics..
4. Viru, A. (2017). Adaptation in Sports Training. Routledge.

**Reference Books:**

1. Dick, W. F. (2016). Sports training principles. London: LepusBooks.
2. Boyle, M. (2016). New functional training for sports. Human Kinetics.
3. Harris, S. S., Anderson, (2018). Care of the young athlete. Matvyew, L.P. (2016). Fundamental of sports training. Moscow: Progress Publishers.

**Web Links:**

1. <https://www.pdhpe.net/factors...training.../types-of-training-and-training-methods/>
2. <https://www.sports-training-adviser.com/sportstrainingprinciples.html>
3. [www.sportireland.ie/Coaching-Ireland/Publications-/Planning-For-Performance.pdf](http://www.sportireland.ie/Coaching-Ireland/Publications-/Planning-For-Performance.pdf)
4. [www.humankinetics.com/products/all.../periodization-training-for-sports-3rd-edition](http://www.humankinetics.com/products/all.../periodization-training-for-sports-3rd-edition)



## Yoga and Health

Semester I  
20PHPE03B

Hours of instruction / Week : 7

### Objectives

- To promote the awareness on Yoga and Health
- To learn scientific techniques to perform yoga vibrantly
- To realize the health benefits and to maintain fitness through yoga

### Unit-I Introduction to Yoga

Yoga –Meaning and Definition- – need and importance of Yoga, Historical background of yoga- Streams of Yoga - Bhakti yoga- karma yoga- Gnana yoga- Raja yoga- Ashtanga yoga and Hatha Yoga 20

### Unit-II - Asanas

Asanas – Meaning-Definition- Aim and Objectives of Asanas- Classifications of asanas- Meditative Asanas-Cultural Asana and Relaxative Asanas-Benefits of Asanas- Muscular and Neuro Muscular mechanisms involved in asanas- Asanas Vs Muscular Exercises- Corrective asanas as per classical instructions in yogic texts for performance. 20

### Unit III – Pranayama

Aims and objectives of pranayama– classification - Phases of pranayama - comparison of pranayama with normal breathing and deep breathing – Respiratory factors involved in Pranayama. 20

**Kriyas** - Definition, aim and objective of Kriyas- Pre-requisites and precautions in their practices - Outline of their techniques and classification – Effect of pranayama on various systems

### Unit IV - Bhandhas and Mudhras

Meditation, Bandhas and Mudras:- Aim and Objectives – Outline of Bandhas and Mudras – Role of Bandhas in different phases of pranayama – Neurophysiologic and psychophysiological mechanisms involved in Meditation-Bandhas and Mudras. 20

Chakras - Yogic diet- Types of Gunas - Physiological, Therapeutic and Spiritual effects of Yoga - Values of yoga.

### Unit V – Health and Fitness

Health–Definition-meaning- factors that influence Health-Need and importance of health -Guiding principles of health and health education- Physical fitness – Identification of level of fitness through yoga and how to improve health through fitness. Components of Health related physical fitness - Assessment of health related fitness. 25

### Course outcomes:

1. Know about the basics of yoga
2. Understand the Health benefits of Yoga
3. Apply the principles of Yoga to live healthy and active life style
4. Analyze the scientific techniques involved in yoga.
5. Develop the knowledge through practical implementation .

**Text Books:**

1. Balizet, A. M., Ballard, J., Blaine, D. Y., Bunn, M., Catlett, B. S., Dark, K., ...& Horton, C. (2016). *Yoga, the Body, and Embodied Social Change: An Intersectional Feminist Analysis*. Lexington Books.
2. Wenger, C. I. (2015). *Yoga minds, writing bodies: Contemplative writing pedagogy*. WAC Clearinghouse.
3. Shiraishi, J. C., & Bezerra, L. M. A. (2016). Effects of yoga practice on muscular endurance in young women.

**Reference Books:**

1. Ranganathan, S. (2016). Review of *The Yoga Sutra of Patanjali: A Biography*, by David Gordon White.
2. Couch, J. (2016). *The runner's yoga book: A balanced approach to fitness*. Shambhala Publications.
3. Clennell, B. (2016). *The Woman's Yoga Book: Asana and Pranayama for All Phases of the Menstrual Cycle*. Shambhala Publications.

**Web Links:**

1. <https://www.verywellmind.com> › ... › Management Techniques › Physical Techniques
2. <https://www.rishikeshyogisyogshala.org/yoga/7-major-benefits-yoga-stress-manageme>
3. <https://www.psychologytoday.com/blog/urban-survival/201512/yoga-stress-relief>
4. <https://www.webmd.com> › Fitness & Exercise › Feature Stories
5. <https://kidshealth.org/en/teens/yoga-stress.html>