

# **NATIONAL COLLEGE**

**(Autonomous)**

Nationally Re accredited at 'A' Grade by NAAC

TIRUCHIRAPPALLI - 620 001



Since 1919

**PG & RESEARCH DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS  
SCIENCES**

**Master of Philosophy in Physical Education (M.Phil.)**

(Applicable to the candidates admitted from the academic year 2019 onwards)

**NATIONAL COLLEGE (AUTONOMOUS), TIRUCHIRAPPALLI - 620 001**

Nationally Re accredited at 'A' Grade by NAAC

M.Phil. PHYSICAL EDUCATION [Full Time]

Choice Based Credit System

(Applicable to the candidates admitted from the academic year 2019 onwards)

**Course structure**

SEMESTER	COURSE	TITLE OF THE PAPER	CREDITS	INTERNAL MARKS	EXTERNAL MARKS	TOTAL
1	M19PE1	RESEARCH METHODOLOGY & STATISTICS IN PHYSICAL EDUCATION	4	25	75	100
	M19PE2	YOGA & FITNESS	4	25	75	100
	M19PE3	TEACHING AND LEARNING SKILLS	4	25	75	100
	M19PE4 (GUIDE PAPER)	AREA OF RESEARCH	4	25	75	100
	M.PHIL DISSERTATION		8	150	50	200
	<b>TOTAL</b>		<b>24</b>			<b>600</b>

# RESEARCH METHODOLOGY & STATISTICS IN PHYSICAL EDUCATION

## CODE:M19PE1

### **Unit - I Research problem, Types of Research and Literature review**

Meaning and Definition of Research - Criteria for selecting research problem - Qualities of Good Research – Basic research – Applied research – Action research – Purpose of the literature review. Institution Ethics Committee clearance.

**Unit- II Experimental Design** Meaning of Variables – independent, dependent, control and intervening variables. Meaning of Experimental designs – Single group design, Reverse group design, Repeated measures design, Static group, Random group design and Related group design

**Unit- III Possible area of research** Historical Research – Philosophical research – Longitudinal research - Case study – Survey - Methods of collecting data – observation – Interview- Questionnaire and experimentation. Sports Science – Sports training, Sports Physiology, Sports Psychology, Sports Biochemistry, Kinanthropometry, Sports Biomechanics, Sports Management, Test & measurement in Physical Education & Sports. Future research in Physical Education

**Unit- IV Analysis of Variance & Covariance and Multivariate technique** Need and importance of analysis of variance -One way Analysis of Variance (problem) and post hoc tests – Scheffé's test, Newman keuls test, Duncan multi range test, Turkey HSD test - Two way analysis of Variance – Factorial designs - Repeated measures of analysis of variance. Analysis of Covariance – One Way – Two Way – Concepts. Brief theoretical concept of Discriminant Analysis - Multivariate analysis of Variance (MANOVA) - Multivariate analysis of Covariance (MANACOVA)

**Unit- V Meta analysis, Correlations and Non-Parametric statistics** Meaning of Meta-analysis - Uses of meta-analysis in Physical Education. Pearson Product moment correlation (problems), Partial (problems) and Multiple Correlations & Wherry Doolittle (Methods) – Concept - Chi-Square (problems) – Rank order Correlation (problems)

### **REFERENCE**

- Berg, Kris E and Richard W. Latin. (1994) *Essentials of Modern Research methods in Health, Physical Education, and Recreation*. New Jersey: Prentice Hall,  
Best, John W and James V.Kahn. (1992) *Research in Education*. New Delhi: Prentice Hall of India,  
Clarke, David H and H.Harrison Clarke. (1984). *Research Processes in Physical Education, Recreation, and Health*. New Jersey: Prentice Hall,  
Clarke, H.Harrison and Clarke,. David H (1972) *Advanced Statistics*. New Jersey: Prentice Hall,  
Kothari C.R. (1985) *Research Methodology*, New Delhi: Wiley Eastern Limited Rothstein, Anne L. (1995) *Research Design and Statistics for Physical Education*. New Jersey: Prentice Hall

## **ELECTIVE: YOGA AND FITNESS - CODE: M19PE2**

### **Unit – I Yoga History**

Yoga – Meaning – Historical Background – Types of Yoga: Bhakthi Yoga, Karma Yoga, Mantra Yoga, Kundalini Yoga, Hatha Yoga, Laya Yoga, Gnana Yoga & Raja Yoga – Principles of yogic practices – Eight Limbs of Yoga – Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana and Samathi.

### **Unit – II Methods of Practicing selected Asanas**

Methods of Practicing selected Asanas (Shanthiasana, Makarasana, Padmasana, Vajrasana, Sukhasana, Samasana, Bhujangasana, Salabhasana, Dhanurasana, Paschimottanasana, Vakrasana, Ardha Matsyendrasana, Yogamudra, Viparitkarani, Sarvangasana, Halasana, Mayurasana, Sirsasana, Chakrasana, & Suryanamaskar) Pranayama (Naddi Suddhi, Nadi Shodhana, Surya Bhedana, Bhastrika, Ujjayi, Bhramari, Sitali, Sitkari) & Meditation (Breathing Meditation, Object Meditation)

### **Unit – III Yoga and Physical Exercise**

Difference between Yoga and Physical Exercise – meaning of physical fitness – Fitness components - Role of Asanas and Pranayama on Physical Fitness components – Measures of Physical Fitness components.

### **Unit – IV Yoga and Mental Health**

WHO – Concept of health – Health Related Physical Fitness and its importance - Evaluation of Health related Physical Fitness components. Role of Yoga on Health related fitness components. Mental Health.

### **Unit – V Research in Yoga**

Recent development in yoga research on fitness and Health – Role of Yoga on sports performance and training on different disciplines: Athletics, Ball Games, Combative sports, Individual sports.

### **REFERENCE**

- Chandrasekaran, K., (1999). *Sound Health through Yoga*, Sedapatti: Prem Kalyan Publications.
- IYENGAR, B.K.S.: (2000). *Light on yoga*, New Delhi: Harper Collins publishers Daryaganj.
- Mariayyah.P., (1989).  
*Asanas*, Coimbatore: Sports Publications.
- Mariayyah.P., (1990). *Suiyanamaskar*, Perunthurai: Jaya Publishing House.
- Mccall, Timothy., (2007). *Yoga as Medicine*, New York:
- Bantam Books. Shrikrishna: (1985). *Essence of Pranayama*, Bombay: ICY Health CENTRE, Kaivalyadhama.
- YOGASANAS: (1983). *A Teacher's Guide NCERT*, New Delhi.

## **COURSE III – TEACHING AND LEARNING SKILLS - M19PE3**

### **Objectives:**

- Acquaint different parts of computer system and their functions.
- understand the operations and use of computers and common
- Accessories
- Develop skills of ICT and apply them in teaching learning context
- and Research
- appreciate the role of ICT in teaching, learning and Research
- acquire the knowledge of communication skill with special
- reference to its elements, types, development and styles
- understand the terms communication Technology and
- Computer mediated teaching and develop multimedia / e-content in
- Their respective subject
- Understand the communication process through the web
- acquire the knowledge of Instructional Technology and its
- Applications
- Develop different teaching skills for putting the content across to
- Targeted audience

### **Unit I – Computer Application Skills**

Information and Communication Technology (ICT): Definition, Meaning, Features, Trends – Integration of ICT in teaching and learning – ICT applications: Using word processors, Spread sheets, power point slides in the class room ICT for Research: On-line journals, e-books, Courseware, Tutorials, Teaching reports, Theses and Dissertations – ICT for Professional Development : Concept of professional development; Institutional efforts for competency building; individual learning for professional development using professional networks, OERs, technology for action research, etc.

### **Unit II – Communication Skills**

Communication : Definitions – Elements of Communication : Sender, Message, Channel, Receiver, Feedback and Noise –Types of Communication : Spoken and written : Non- verbal communication - Intrapersonal, Interpersonal, Group and Mass communication- Barriers to communication : Mechanical, Physical, Linguistic & Cultural – Skills of communication : Listening, Speaking, Reading and writing – Methods of developing fluency in oral and written communication – style, Diction and Vocabulary – Classroom communication and dynamics.

### **Unit III – Pedagogy**

Instructional Technology: Definition, Objectives and Types – Difference between Teaching and Instruction – Lecture Technique: Steps, Planning of a Lecture, Delivery of a Lecture – Narration in tune with the nature of different disciplines – Lecture with power point presentation – Versatility of Lecture techniques – Demonstration: Characteristics, Principles, planning Implementation and Evaluation – Teaching – Learning Techniques: Team Teaching, Group discussion, Seminar, Workshop, Symposium and Panel Discussion.

### **Unit IV – E-learning, Technology Integration and Academic Resources in India**

Concept and types of e-learning (Synchronous and asynchronous instructional delivery and means), m-learning (mobile apps); blended learning; flipped learning; E-learning tools (like LMS; software's for word processing, making presentations, online editing, etc.); subject specific tools for e-learning; awareness of e-learning standards- concept of technology integration in teaching – learning processes; frameworks guiding technology integration (like TPACK; SAMR); Technology Integration Matrix- Academic Resources in India; MOOC, NMEICT; NPTEL; e-pathshala; SWAYAM, SWAYAM Prabha, National Academic Depository, National Digital Library; e-Sodh Sindhu; virtual labs; eYantra, Talk to a teacher, MOODLE, mobile apps, etc.

### **Unit V – Skills of Teaching and Technology based assessment**

Teaching skills : Definition, Meaning and Nature – Types of Teaching skills : Skill of Set Induction, Skill of Stimulus Variation, Skill of Explaining, Skill of Probing Questions, Skill of Black Board writing and Skill of Closure- Integration of Teaching Skills – Evaluation of Teaching Skills – Technology for Assessment: Concept of assessment and paradigm shift in assessment; role of technology in assessment 'for' learning; tools for self & peer assessment (recording devices; e-rubrics, etc.); online assessment (open source software's; e- portfolio; quiz makers; e-rubrics; survey tools); technology for assessment of collaborative learning like blogs, discussion forums; learning analytics.

### **References :**

1. Bela Rani Sharma (2007), Curriculum Reforms and Teaching Methods, Sarup and sons, New Delhi.
2. Brandon Hall, E-learning, A research note by Namahn, found in: [www.namahn.com/resources/.../note-e-learning.pdf](http://www.namahn.com/resources/.../note-e-learning.pdf), Retrieved on 05/0/2011
3. Don Skinner (2005), Teacher Training, Edinburgh University Press Ltd., Edinburgh
4. Information and Communication Technology in Education : A Curriculum for Schools and programmed of Teacher development, Jonathan Anderson and Tom Van Weert, UNESCO,2002.
5. Jereb, E.,& Smitek, B.(2006). Applying multimedia instruction in e-learning. Innovations in Education & Teaching International,43(1),15-27.
6. Kumar K.L. (2008) Educational Technology, New Age International Publishers, New Delhi.
7. Learning Management system: [https://en.wikipedia.org/wiki/Learning management system](https://en.wikipedia.org/wiki/Learning_management_system), Retrieved on 05/01/2016
8. Mangal S.K.(2002) Essential of Teaching –Learning and Information Technology, Tandon Publications, Ludhiana.
9. Michael D. and William (2000). Integrating Technology into Teaching And Learning : Concepts and Applications, Prentice Hall, New York
10. Pandey S.K. (2005) Teaching Communication, Commonwealth Publishers, New Delhi.
11. Ram Babu A. abd Dandapani S (2006) Microteaching (Vol. 1 & 2) Neelakamal Publications, Hyderabad.
12. Singh V.K.. and Sudarshan K.N. (1996) Computer Education, Discovery Publishing Company, New York.
13. Sharma R.A. (2006) Fundamentals of Educational Technology, Surya Publications, Meerut
14. Vanaja. M. and Rajasekar S. (2006) Computer Education, Neelkamal Publications, Hyderabad.

## **AREA OF RESEARCH - CODE:M19PE4**

### **UNIT I Introduction**

Formation of Title – Research proposal . Front materials- Introduction – Rationale of the study – Statement of problem – Hypothesis in different forms – Delimitation – Limitation – operational definition – Significance of the study. Research proposal.

### **UNIT II Literature Search**

Finding related literature (abstract, journal, unpublished work) search engine, e- journal (online sources) – data base centre. Critical and allied literature – Basic literature search strategies. Primary and secondary references.

### **UNIT III Methodology**

Selection of subjects – sampling – variables – rationale for selecting the variables. Pilot work – Measurement- reliability and validity. Selection of test. Testing Equipments. Treatment. Data Collection. Research / Experimental design, Statistical technique.

### **UNIT IV Analysis of the data and results**

Statistical analysis of the data. Descriptive statistics –Statistical tool to be used – Data analysis using Computer. Level of confidence – Degrees of freedom. Discussion of findings. Graphs and its various types. Discussion on hypothesis.

### **UNIT V Summary, Conclusions and recommendations**

Summary, Conclusions and recommendations. Back materials – Bibliography & Appendix Chapterisation – Mechanics of writing a research report – Style Manuals : MLA, Chicago, APA. Writing an APA Style research report. Writing synopsis.

### **REFERENCE**

Berg, Kris E and Richard W.Latin. (1994). Essentials of Modern Research methods in health, Physical Education, and Recreation. New Jersey : Prentice hall

Gravetter, Frederick J and Lori – Ann B. Forzana. (2009). Research methods for behavioral sciences (3<sup>rd</sup> ed) Belmont: Wadsworth Cengage Learning.

Miller, David, K. (2000). Measurement by the Physical Educators – Why and How (4<sup>th</sup> ed) New Delhi: McGraw- Hill. Rothstein, Anne L. (1995). Research Design and Statistics for Physical Education. New Jersey: Prentice Hall.