

# **BHARATHIDASAN UNIVERSITY**

*(Accredited with A<sup>+</sup> Grade by NAAC in the Third Cycle)*

**TIRUCHIRAPPALLI - 620 024**



**DEPARTMENT OF PHYSICAL EDUCATION AND YOGA**

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

*(With effect from the academic year 2021-22 onwards)*

**REGULATIONS, SCHEME OF EXAMINATIONS AND SYLLABUS**



**BHARATHIDASAN UNIVERSITY, TIRUCHIRAPPALLI - 620 024**

*(Accredited with A<sup>+</sup> Grade by NAAC in the Third Cycle)*

**Department of Physical Education & Yoga**

**M.Phil. Physical Education**

**(With effect from the academic year 2021-22 onwards)**

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**REGULATIONS, SCHEME OF EXAMINATIONS AND SYLLABUS**

The common regulations for all M.Phil. programme is available in the University Website, which is applicable from 1st July 2018 onwards. The M.Phil. Physical Education specific regulations, scheme of examination and syllabus is presented hereunder, which is effect from the academic year 2021-22 onwards.

**1. Eligibility**

A. A Candidate with Master's Degree in the Physical Education with

55% of marks / 5.51 of CGPA in the 10 point scale under CBCS or above
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50% of marks or above for OBC (Non-Creamy Layer)/SC/ST/Differently able
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50% of marks or above for those who got Master's degree prior to 19.09.1991
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B. Entrance examination will be conducted by the department for the eligible applicants for 100 marks. However students with NET/SLET/CSIR are exempted from applying for entrance exams.

**2. Duration**

The duration of the M.Phil. programme shall be one year consisting of two semesters for the full - time programme.

**3. Examination**

The final examination for Courses – I, II, III & IV (Elective) shall be conducted at the end of the first semester. Question papers for the final examination of Courses – I to IV shall be set externally and valued by external examiners who will form the Board of Examiners to pass the results. A candidate shall be declared to have passed Course I, II, III and IV, if he / she secures not less than 40% of the marks in both CIA and the University Examination and 50% of the marks in the aggregate (i.e. continuous internal assessment and the written examination taken together).

**4. Dissertation**

The dissertation shall be submitted after the successful completion of the all course works, through the Supervisor and the Head of the Department not earlier than 5 months from the date of start of the second semester. The dissertation shall be valued by one external examiner and by the Research Supervisor for maximum of 150 marks by each examiner and the average of the marks awarded by both the examiners shall be taken for consideration.

**5. Viva-Voce Examination**

An open Viva-Voce examination shall be conducted by both the external examiner and the supervisor and shall be attended by members of Department Research Committee members, all faculty members of the departments, other research scholars and other interested experts / researchers and evaluated jointly by the examiner and the Supervisor for the maximum of 50 marks. The valuation of

M.Phil. Dissertations and the viva-voce examination shall be carried out on the same day at the place of the Research Supervisor (viva is to be conducted only if the student passes in the valuation of the dissertation). A candidate shall be declared to have passed Part-II Examination if he secures not less than 55% of the marks prescribed for the dissertation and 55% of the marks prescribed for the viva-voce Examination.

## 6. Course Structure

Semester	Course	Title of the course	Subject code	Hours / Week	Exam hours	Credits	Marks		
							IA	UA	Total
I Part-I	Course-I	Research Methodology and Advance Statistics	21MPLPE1	7	3	4	25	75	100
	Course-II	Elective I. Sports training II. Sports Psychology III. Yoga and Fitness IV. Exercises for health living V. Kinanthropometry	21MPLPE2A 21MPLPE2B 21MPLPE2C 21MPLPE2D 21MPLPE2E	7	3	4	25	75	100
	Course-III	Communication, Technology and Modern teaching	21MPLPE3	7	3	4	25	75	100
	Course-IV	Area of Research a. Experimental study b. Comparative study c. Relationship and Prediction study d. Survey study e. Descriptive study	21MPLPE4A 21MPLPE4B 21MPLPE4C 21MPLPE4D 21MPLPE4E	7	3	4	25	75	100
II Part-II	---	Dissertation** (Dissertation -150 marks + Viva Voce 50 marks)		8	-	8	-	-	200

## 7. Continuous Internal Assessment

The following components shall be adopted for continuous internal evaluation / assessment.

1	Best 2 tests out of 3	10 Marks
2	Attendance	05 Marks
3	Seminar	05 Marks
4	Assignment	05 Marks
	Total	25 Marks

## 8. Question Paper Pattern

Section A: 10 Questions x 2 Marks = 20 Marks

(Two Questions from each unit)

Section B: 5 Questions x 5 Marks = 25 Marks

(Internal Choice and a set of questions from each unit)

Section C: 3 Questions x 10 Marks = 30 Marks

(Answer any three out of 5 questions and one question from each unit)

## 9. Programme Outcomes

- M.Phil. is a pre-doctoral professional programme meant for preparing scholar for research in Physical Education and Sports science.
- To prepare highly competent researcher and skilled teachers in the field of Physical Education & Sports and to serve the society.

- To acquired advance knowledge on higher academic system in Physical education.
- Practical training gives better understanding of research.
- The programme basically to trained the researcher.
- Development of personality, communication and leadership qualities.
- Have the skills and traits to working across the globe.
- Earning capabilities of livelihood for comfortable life.

#### **10. Programme Specific Outcomes**

- To integrate the study in social context of Physical Education & Sports Sciences.
- To update the subject knowledge, pedagogical knowledge, computer skills and communication skills.
- To attain the skills and knowledge on competitive exams, national and state level eligible test and other equivalent competitive exam in the field of Physical Education.
- The programme comprises of core and elective theory courses as well as project.
- To learn the advance technologies in sports sciences.
- The programme gives practical exposure to research and teaching.
- Adequate training will be given on research in Physical Education and allied areas.
- Capability of getting employment as Assistant Professor, Director of Physical Education in Government, Government aided and Private institutions.



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**Department of Physical Education & Yoga**

Semester-I

Part-I

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

Credit-4

## **CC-I RESEARCH METHODOLOGY & ADVANCE STATISTICS (21MPLPE1)**

### **Objectives**

- To impart advance concepts of research in Physical Education.
- To give an overview about various research design and variables.
- To know the possible research areas in Physical Education.
- To provide the basic applications of advance statistics such as ANOVA and ANCOVA.
- To train on correlation and non-parametric statistics application.

### **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. Meaning and definition of ethics. Need of ethics in research. Ethical issues in research. Institution Ethics committee clearance.

### **Unit- II Variables and Research 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. Historical Research – Philosophical research – Longitudinal research - Case study – Survey - Methods of collecting data – observation – Interview- Questionnaire and experimentation.

### **Unit- III Possible area of research**

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. A group project is to be undertaken by a small batch of scholar under the supervision of a teacher.

### **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 – Scheffe's test, Newman keuls test, Duncan multi range test, Turkey HSD test (problem) - Two way analysis of Variance – Factorial designs - Repeated measures of analysis of variance (problem). Analysis of Covariance – One Way – Two Way – Concepts. Brief theoretical concept of Discriminate 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).

### **TEXT BOOKS**

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,

### **REFERENCE BOOKS /WEBSITES**

Berg, Kris E and Richard W. Latin. (1994) *Essentials of Modern Research methods in Health, Physical Education, and Recreation*. 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

<https://books.google.co.in/books?id=hZ9wSHysQDYC&printsec=frontcover#v=onepage&q&f=false>

<https://www.pdfdrive.net/research-methodology-books.html>

### **Course outcomes**

- Provided the advance knowledge about research in physical education.
- Understood the concept of research design and variables.
- Gain fair idea about the possible area of research and future research in Physical Education
- Provided the basic applications of advance statistics such as ANOVA and ANCOVA.
- Application of statistical techniques namely correlation and non-parametric statistics was studied.



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**Department of Physical Education & Yoga**

Semester-I Part-I Master of Philosophy in Physical Education (M.Phil.)

Credit-4

**CC-II ELECTIVE – I SPORTS TRAINING (21MPLPE2A)**

**Objectives**

- To provide advance knowledge in sports training & its principles, conditioning, load and recovery.
- To educate on speed and strength parameters.
- To understand the basics of endurance, flexibility and co-ordinative abilities.
- To give an overview about periodization and planning.
- To impart fundamentals of coaching and fitness test.

**Unit – I Sports training principles, Conditioning, Load and Recovery**

Definition and meaning of training, coaching and conditioning - Aim and tasks of sports training - Principles of sports training - Characteristics of sports training - Scope of sports training. Need and importance of Sports training. Basic methods of conditioning: Characteristics and common variations of basic methods of conditioning. Training load: Load and adaptation process. Overload – symptoms, causes and remedy. Condition for super compensation. Load and Recovery: Phases of recovery. Over training, detraining and retaining.

**Unit – II Speed and Strength**

Training components; strength: different forms of strength, Factors determining strength; types of muscle contraction; methods of strength improvement, importance of strength and its relationship with the performance factors - Strength in yearly training cycle - Speed: Different types speed abilities; Factors determining speed: Improvement of speed abilities, speed barrier.

**Unit – III Endurance, Flexibility and Co-ordinative abilities**

Endurance: Importance of endurance; Types of endurance; Factors determining endurance; improvement of endurance - Nutrition and endurance performance; altitude training for endurance. Flexibility: Importance of flexibility; types of flexibility, factors determining flexibility; improvement of flexibility (methods); flexibility training; co-ordinative abilities, Nature and definition, Description of co-ordinative abilities. Improvement of co-ordinative abilities.

**Unit – IV Periodization and planning**

Periodization: Sports form and top form. Aim and contents of periods, preparatory, competition and transitional period - Periodical cycles - micro, meso and macro cycles - Types of periodization and duration of the periods - Training plans: Types of training plans; Short and long term plans. Tapering. Talent identification. Technical and tactical preparation for sports. Doping and WADA. Effect of drugs, alcohol and smoking on performance. Effect of climate change and high altitude on performance. Effect of sleep and rest on performance.

**Unit – V Coaching**

Coaching: Training schedule for different sports and games. Preparation for competition – build-up competition, main competition, competition frequency. Psychological preparation. Performance analysis. Diet and performance. Effect of travel on performance. Beep test, Yo – Yo Endurance test, Yo – Yo intermittent endurance test, Yo – Yo intermittent recovery test, Pacer test, Legar shuttle test, Multi-stage fitness test.

**TEXT BOOKS**

Dick, Frank W. (1980) *Sports Training Principles*. London: Henry kimpton Publishers  
Harre, Dietrich, (ed). (1982) *Principles of sports training*. Berlin: Sportverlag  
Matreyev, L. (1981) *Fundamentals of sports training*. Moscow: Progress Publishes

**REFERENCE BOOKS / WEBSITES**

Llewellyu, Jack H. and Judy A. Blucker. (1982) *Psychology of coaching: theory and Application*, New Delhi: Surjeet Publicaitons  
Shaver, Larry G (1982). *Essential of exercise Physiology*, Delhi: Surjeet Publications  
Singh, Hardayal. (1991) *Science of Sports training*. New Delhi: D.V.S.Publications  
[www.teachPE.com](http://www.teachPE.com)

**Course outcomes**

- Provided the advance knowledge in sports training & its principles, conditioning, load and recovery.
- Gain knowledge on speed and strength.
- Attained knowledge on endurance, flexibility and co-ordinative abilities.
- Studied the concept of periodization and planning in sports training.
- Understood the fundamentals of coaching and fitness testing.



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**Department of Physical Education & Yoga**

Semester-I

Part-I

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

Credit-4

**CC-II ELECTIVE – II SPORTS PSYCHOLOGY (21MPLPE2B)**

**Objectives**

- To understand the value of sports psychology and its methods.
- To study basics of learning and personality.
- To impart the fundamentals of motivation and mental preparation.
- To know about leadership, counseling and group dynamics.
- To provide an overview about psychology and sports performance.

**Unit – I Introduction to Sports Psychology**

Meaning & definition of Psychology and Sports Psychology. Evolution of sports psychology - General principles of human growth and development. Individual difference and their implications in sports. Heredity and environment. Methods of Sports psychology – Observation method, Introspection – Interrogation method – Tests – Experiments – Case study.

**Unit – II Learning and personality**

Meaning & definition of learning. Theories of learning. Laws of learning – Readiness, Exercise, Effect. Meaning & definition of personality – dimension of personality, theories of personality, personality and sports performance. Sports participation & personality development – Catharsis – Self image, Emotional control, stress tolerance, co-operation, Improved psychomotor co-ordination.

**Unit – III Motivation and Mental preparation**

Meaning & definition of motivation, types of motivation - Intrinsic & Extrinsic. Theories of motivation, motivation and sports performance, Goal setting. Mental preparation strategies, preparatory arousal, Attention focus, Self talk, Progressive relaxation, imagery.

**Unit – IV Leadership and Group dynamics**

Meaning and definition of leadership, types of leadership, leadership in sports. Group dynamics and team cohesion. Effects of audience in sports. Counselling in sports: Importance & Need of Psychological Counselling, Types of Counselling like Individual, Group, Team. Effective Counselling Methods & Techniques, Case studies, Role Plays and Discussion.

**Unit – V Psychology and Sports performance**

General psychology test, sports specific test, laboratory testing, field testing. Psychological factors affecting sports performance. Stress, anxiety, tension, aggression. Symptoms & causes of psychological factors all mentioned above. Bio feedback, autogenic training.

**TEXT BOOKS**

- Alderman, R.S. (1974). *Psychological behavior in Sports*, Philadelphia: Saunders Company.  
Cratty, B. J., (1968). *Psychology and Physical activity*. Englewood Cliffs: Prentice Hall.  
Cratty, Bryant, J.(1975). *Movement Behaviour and Motor Learning*, Philadelphia: Lea & Fogger.

**REFERENCE BOOKS / WEBSITES**

- Butt, Doras Susan,(1989). *Psychology of Sports*, New York: Van. Nostrand Reinhold Co.  
Cratty, Bryant, J. (1975). *Psychology of Contemporary Sports*, Englewood Cliffs, N.J, prentice Hall Inc.  
Gita Mathew W. (1997). *Sports Psychology*, Karaikudi : Shijin and Shijin Brothers.  
Kamlesh, M.L. (1998). *Psychology in Physical Education and Sport*, Metropolitan Book Co., New Delhi.  
Weinberg, Roberts and Gould, Daniel (2003) *Foundation of sport*, 3<sup>rd</sup> ed Illinois: Human kinetics.  
[www.teach PE.com](http://www.teach PE.com)

**Course outcomes**

- Learned the evolution of sports psychology and its methods.
- Given fair idea about the learning and personality in sports psychology.
- Understood the concept of motivation and mental preparation.
- Attained the knowledge on leadership, counseling and group dynamics.
- Studied the influence of various sports psychology factors in sports.



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**Department of Physical Education & Yoga**

Semester-I

Part-I

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

Credit-4

**CC-II ELECTIVE – III YOGA AND FITNESS (21MPLPE2C)**

**Objectives**

- To know the historical background of yoga, its types and limbs.
- To train on the selected yogic practices.
- To educate on difference between yoga and physical exercise.
- To study the basic concept of yoga and mental health,
- To provide an idea about research in yoga.

**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 Practices**

Methods of Practicing selected Asanas (Shanthiasana, Makarasana, Padmasana, Vajrasana, Sukhasana, Samasana, Bhujangasana, Salabhasana, Dhanurasana, Paschimottanasana, Vakrasana, Ardha Matsyendrasana, Yogamudra, Viparitarani, Sarvangasana, Halasana, Mayurasana, Sirsasana, Chakrasana, & Suryanamaskar) Pranayama (Nadi 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. International Yoga day - Common yoga protocol for international day of yoga – history. Schools of yoga.

**TEXT BOOKS**

Iyengar, B.K.S.: (2000). *Light on yoga*, New Delhi: Harper Collins publishers Daryaganj.  
Mariayah.P., (1989). *Asanas*, Coimbatore: Sports Publications.  
Shrikrishna: (1985). *Essence of Pranayama*, Bombay: ICY Health CENTRE, Kaivalyadhama.

**REFERENCE BOOKS / WEBSITES**

Chandrasekaran, K., (1999). *Sound Health through Yoga*, Sedapatti: Prem Kalyan Publications.  
Mariayah.P., (1990). *Suiyanamaskar*, Perunthurai: Jaya Publishing House.  
Mccall, Timothy., (2007). *Yoga as Medicine*, NewYork: Bantam Books.  
Yogasanas: (1983). *A Teacher's Guide NCERT*, New Delhi.

[www.ayush.gov.in](http://www.ayush.gov.in)

[www.yogamdny.nic.in](http://www.yogamdny.nic.in)

**Course outcome**

- Learned historical background of yoga, its types and limbs
- Attained knowledge of methods of practices.
- Studied the difference between yoga and physical exercises.
- Gain knowledge on yoga and mental health.
- Given fair idea about research in yoga in detail.





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**Department of Physical Education & Yoga**

Semester-I

Part-I

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

Credit-4

## **CC-II ELECTIVE – IV EXERCISES FOR HEALTH LIVING (21MPLPE2D)**

### **Objectives**

- To provide the fundamental knowledge on exercises and training.
- To know about the various types of exercises.
- To educate on exercises for various populations.
- To study the exercises for diseases and disorders.
- To understand the methods of assessment of health and physical fitness levels.

### **Unit – I Fundamental of exercises**

Meaning and definition of health, exercises, physical activities and exercise therapy. Difference between exercises and physical activities. Warming-up exercises, Walking, Jogging, Running, Spot running, Free hand exercises, Hopping, Skipping, Bounding strides, High knee action, Side stepping, Stepping on the bench, Stretching exercises, Calisthenics, and Cooling down exercises.

### **Unit – II Types of exercises**

Aerobics, Swimming, Cycling, Sand running, Uphill running and Fartlek training. Circuit training, Plyometric training and Resistance training. Weight training with - own body weight, partners and equipment. Weight machines and exercises – Single and multiple stations. Exercise with Cardio machines, Barbell exercises, Dumbbell exercises, Swiss ball exercises and Medicine ball exercises.

### **Unit – III Exercises for various population**

Exercises for children, adolescent, middle age, and elderly population. Exercise for pregnant women. Exercises for special population.

### **Unit – IV Exercise for disease / disorders**

Exercises for obesity, diabetes, weight control and cardiovascular diseases. Stress management through exercises.

### **Unit – V Assessment of health and physical fitness**

Height and Weight measurements. Height and weight ratio. Body Mass Index and its Evaluation. Waist to Hip ratio. Waist circumference. Resting pulse rate (manual method – during - resting and training). Mobile apps. Fitness tests: Speed - 50m run & 30m run; Strength – standing broad jump & standing shot put; Endurance – 12 minutes run & 2.4 km run; Agility – shuttle run & zig zag run; Flexibility – sit and reach & forward bend and reach.

### **TEXT BOOKS**

American College of Sports Medicine (2006). *ACSM'S Guidelines for Exercise Testing and prescription*. (7<sup>th</sup> Ed ) Philadelphia Pa : Lippincott, Williams & Wilkins

Dick, Frank W. (1980). *Sports training principles*. London: Henry Kimpton publishers.

Matreyev, L., (1981). *Fundamentals of Sports training*. Moscow: Progress publishes

Singh, Hardayal, (1995). *Science of Sports training*. New Delhi: D.V.S. Publications.

Uppal, A.K., (1992). *Physical Fitness How to Develop*. New Delhi: Friends Publication.

### **REFERENCE BOOKS / WEBSITES**

Baechle, Thomas. R, & Earle, Roger. W., (2000). *Essentials of Strength Training and Conditioning*. Champaign: Human Kinetics.

Brooks, Douglas. S., (2004). *The Complete Book of Personal Training*. Champaign: Human Kinetics.

Don Franks. B. & Edward. T. Howley, (1989). *Fitness Facts: The Healthy Living Handbook*. Champaign: Human Kinetics.

Harre, Dietrich, (1982). *Principles of Sports training*. (ed). Berlin: Sportverlag.

James and Leona Hart, (2000). *Fitness and Wellness*. New Delhi: Goodwill Publishing House.

Sandler, David., (2010). *Fundamental Weight Training*. Champaign: Human Kinetics.

[www.teachPE.com](http://www.teachPE.com)

### **Course outcome**

- Acquiring fundamental knowledge on exercises and training.
- Learning the various types of exercises.
- Studied the exercises for various populations.
- Got a fair idea about the exercises for diseases and disorders.
- To understand the methods of assessment of health and physical fitness levels.



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Semester-I

Part-I

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

Credit-4

**CC-II ELECTIVE – V KINANTHROPOMETRY (21MPLPE2E)**

**Objectives**

- To know the basics of anthropometry and kinanthropometry.
- To educate on ISAK and its role.
- To study the equipments and software's used in kinanthropometry.
- To provide an idea about basic and length measurements.
- To impart basic concept of body girth, skeletal diameters and skin fold.

**Unit – I Introduction to kinanthropometry**

Meaning and Definition of anthropometry and kinanthropometry. Relation between kinanthropometry and anthropometry. Applications of kinanthropometry. Relevance of Kinanthropometry in Physical Education and research.

**Unit – II ISAK**

ISAK formation, history and its role. ISAK quality policy. ISAK Courses & Membership. Landmarks and measurement of various body segments.

**Unit – III Equipment and software's**

Anthropometric rod, weighing machine, non stretchable steel tape, sliding caliper, Harpendon skin fold caliper.

**Unit – IV Basic and Length measurements**

Anthropometric Measurements: Method of Measuring Height: Standing Height, Sitting Height. Methods of measuring weight. Length measurement - Leg length - Upper leg length - Lower leg length.

**Unit – V Body Girth, Skeletal diameters and Skin fold**

Method of measuring diameters / circumference: Arm, Waist, Hip, Thigh. Skeletal Diameters - Knee Diameters - Ankle Diameter. Method of Measuring Skin folds: Triceps, Sub scapular, Suprailiac. Skin fold - Calf skin fold - Thigh skin fold – Abdomen. Body Girths - Calf girth - Thigh Girths - Hip Girths. Body mass index, Ponderal index

**TEXT BOOKS**

John Mclester & Peter St. Pierre. (2008). Applied Bio-Mechanics Concepts & Connections. Candada: Thomson Wadsworth.

James A. P. Day. (1986). Perspectives in Kinanthropometry. Virginia: Human Kinetics Publishers.

**REFERENCE BOOKS / WEBSITES**

Harminder Singh Sodhi & L. S. Sidhu. (1984). Physique and Selection of Sportsmen: A Kinanthropometric Study. Punjab: Punjab Publishing House.

<https://www.isak.global/>

**Course outcome**

- Learned the basics of anthropometry and kinanthropometry.
- Attained knowledge on ISAK and its role.
- Understood the uses of equipments and software's in kinanthropometry.
- Studied the basic and length measurements.
- Given fair idea about body girth, skeletal diameters and skin fold.



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Semester-I

Part-I

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

Credit-4

### **CC-III COMMUNICATION, TECHNOLOGY AND MODERN TEACHING (21MPLPE3)**

#### **Objectives**

- To educate and to provide knowledge about computer and its application.
- To know the basics of internet and e-resources.
- To educate on communication skills.
- To impart fundamental of educational skills.
- To provide basic knowledge about professional preparation for competitive exams.

#### **Unit- I Computer**

Fundamentals of Computer. Component of Computer. Hardware, software. Word document, Spread sheet, PDF. Presentation – power point and animations. Use of Computer in Physical Education. Statistical calculation through excel. Online statistical solution resource. Meaning and advantages of SPSS. Statistical tools available in SPSS. Open source performance analysis soft wares. Plagiarism. Copy right. Patent.

#### **Unit- II Internet**

Internet. Advantages of Internet. World Wide Web (www). Webpage. Website. Server. Designing the website for Physical Education department. Online & offline e-resources. e-mail, mail attachment, downloading, chat, website. Search engine – Meta search engine, e-journal, e-book, e-library, data base centre, E-resources for teaching and Learning. ISSN, ISBN. Impact factor, Citation and h-index.

#### **Unit- III Communication Skill**

Meaning of Communication – Forms of Communication – Verbal, Non-Verbal and Graphic. Types of Communication – Intra personal, Inter personal, Public and Mass. Communication process, Role of communication in the present scenario. Communication in Teaching – Do's & Don'ts. Effective Communication. Letter Writing, Report Writing- Memo's - Note making, Agenda preparation.

#### **Unit- IV Educational Skills**

Meaning of Pedagogy, Components of Education, Methods of Education – Model, Convincing, Reward & Punishment, Habituation, Task. Teacher Education Psychology. Research Education. Soft skills – Interview Skills –Preparing for interview, Presentation Skills, Structuring of presentation. Body Language, Speaking, Pronunciation, Group Discussion. Skills in listening & expressing effectively. Issues and challenges in Higher Education. Role of Physical Education in the society.

#### **Unit- V Professional Preparation for Competitive Examination**

Professional preparation for NET, SET and other competitive examination in Physical Education. Teaching aptitude, Research aptitude, Reading comprehension, Communication, (Including Mathematical) Logical reasoning, Data interpretation, Information and Communication Technology, People and environment and Higher Education system: Governance, Polity and administration. Teaching as a career. Basic Qualities of a successful teacher. Preparation of the specialized physical education teacher.

#### **TEXT BOOKS**

Deitel.H.M., Deital, P.J. and Goldberg, A.B. (2005) *Internet & World Wide Web How to program* (3 Ed) New Delhi: Prentice – Hall of India Private Limited.

George, Daren and Paul Maery (2006) *SPSS for windows step by step* (6Ed) New Delhi: Pearson Education Inc.,

#### **REFERENCE BOOKS / WEBSITES**

Gravetter, Frederick, J. and Forzan, Lori-Ann B., (2009) *Research Methods for Behavioral Sciences*. USA: Wadsworth

Jyohanty, Jagannath (2004), *Modern Trends in Educational Technology*, Hyderabad: Neel Kamal Publications

Rajasekar . S. (2005) *Computer Education and Educational Computing*, Hyderabad: Neel Kamal Publications

Snell, Ned., (1998) *Sams Teach Yourself The Internet Starter kit in 24 hours*. New Delhi: Techmedia.

[www.teachPE.com](http://www.teachPE.com)

#### **COURSE OUTCOMES**

- Provided knowledge about computer and its application.
- Understood the role of internet & e-resources and their usages in research.
- Gaining knowledge on communication skills.
- Learned the concepts of educational skills.
- Attain knowledge about how to prepare for competitive exams.



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Credit-4

## **CC-IV AREA OF RESEARCH a. Experimental study (21MPLPE4A)**

### **Objectives**

- To impart fundamental research concepts on experimental studies.
- To know about variables, training and testing.
- To understand the process of research including design used in experimental studies.
- To train on application of statistics in experimental studies.
- To provide an overview of research report writing.

### **Unit-I Introduction to research**

Fundamental concepts: Meaning, need, nature, aim, objectives and scope of the topic – purpose, Justification and usefulness of the topic, statement of the problem, Hypothesis, Delimitations and Limitations, Front materials of the dissertation – Reviews.

### **Unit-II Variables, training and testing**

Methodology: Selection of subjects – variables – justification –scheduling - Apparatus and materials – tests – methods of testing and training procedures.

### **Unit-III Research design**

Research Design – Meaning, need, importance – features – types. Principles of sampling – Population – size – steps in sampling. Criteria for selecting a sampling design – characteristics – Types – Random Sampling – Complex Random Sampling design

### **Unit-IV Application of Statistics**

Testing hypothesis: Concept and calculations of the following: Descriptive statistics: Mean, Median, Mode and Standard deviation. Test for difference between mean; Independent 't' test – dependent 't' test – Repeated measures ANOVA – Analysis of Covariance (ANCOVA) Post-hoc test: Scheffe's and Least Significant difference test (LSD). Application of Statistical Software for experimental studies. Statistical analysis through excel. Statistical software – SPSS and Vassarstat.

### **Unit-V Research report writing**

Significance of Research Report Writing – Steps in Research report writing – Types of Reports, Mechanics of writing a Research report – Precaution for writing Research reports – thesis formal – Chapterization – Tabulation – Graphs / Figures, Conclusion – Recommendation – Bibliography –appendices.

### **TEXT BOOKS**

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,

### **REFERENCE BOOKS / WEBSITES**

Berg, Kris E and Richard W. Latin. (1994) *Essentials of Modern Research methods in Health, Physical Education, and Recreation*. 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

<https://www.pdfdrive.net/research-methodology-books.html>

### **Course outcomes**

- Provided the basic knowledge on experimental studies.
- Learned about variables, training and testing.
- Understood process of research including design to be used in experimental studies.
- Attained knowledge about the various types of statistics and its application in experimental studies.
- Preparing of research report was studied thoroughly.



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Credit-4

### **CC-IV AREA OF RESEARCH b. Comparative study (21MPLPE4B)**

#### **Objectives**

- To impart fundamental research concepts on comparative studies.
- To know about variables, training and testing.
- To understand the process of research including design used in comparative studies.
- To train on application of statistics in comparative studies.
- To provide an overview of research report writing.

#### **Unit-I Introduction to research**

Fundamental concepts: Meaning, need, nature, aim, objectives and scope of the topic – purpose, Justification and usefulness of the topic, statement of the problem, Hypothesis, Delimitations and Limitations, Front materials of the dissertation – Reviews.

#### **Unit-II Variables, training and testing**

Methodology: Selection of subjects – variables – justification –scheduling - Apparatus and materials – tests – methods of testing and training procedures.

#### **Unit-III Research design**

Research Design – Meaning, need, importance – features – types. Principles of sampling – Population – size – steps in sampling. Criteria for selecting a sampling design – characteristics – Types – Random Sampling – Complex Random Sampling design

#### **Unit-IV Application of Statistics**

Testing hypothesis: Concept and calculations of the following: Descriptive statistics: Mean, Median, Mode and Standard deviation. Test for difference between mean; Independent 't' test – dependent 't' test – Repeated measures ANOVA – Analysis of Covariance (ANCOVA) Post-hoc test: Scheffe's and Least Significant difference test (LSD). Application of Statistical Software for comparative studies. Statistical analysis through excel. Statistical software – SPSS and Vassarstat.

#### **Unit-V Research report writing**

Significance of Research Report Writing – Steps in Research report writing – Types of Reports, Mechanics of writing a Research report – Precaution for writing Research reports – thesis formal – Chapterization – Tabulation – Graphs / Figures, Conclusion – Recommendation – Bibliography –appendices.

#### **TEXT BOOKS**

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,

#### **REFERENCE BOOKS / WEBSITES**

Berg, Kris E and Richard W. Latin. (1994) *Essentials of Modern Research methods in Health, Physical Education, and Recreation*. 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

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#### **Course outcomes**

- Provided the basic knowledge on comparative studies.
- Learned about variables, training and testing.
- Understood process of research including design to be used in comparative studies.
- Attained knowledge about the various types of statistics and its application in comparative studies.
- Preparing of research report was studied thoroughly.



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Credit-4

### **CC-IV AREA OF RESEARCH c. Relationship and prediction study (21MPLPE4C)**

#### **Objectives**

- To impart fundamental research concepts on relationship and prediction studies.
- To know about variables and testing.
- To understand the process of research including design used in relationship and prediction studies.
- To train on application of statistics in relationship and prediction studies.
- To provide an overview of research report writing.

#### **Unit-I Introduction to research**

Fundamental concepts: Meaning, need, nature, aim, objectives and scope of the topic – purpose, Justification and usefulness of the topic, statement of the problem, Hypothesis, Delimitations and Limitations, Front materials of the dissertation – Reviews.

#### **Unit-II Variables and testing**

Methodology: Selection of subjects – variables – justification –scheduling - Apparatus and materials – tests – methods of testing.

#### **Unit-III Research design**

Research Design – Meaning, need, importance – features – type. Principles of sampling – Population – size – steps in sampling design. Criteria for selecting a sampling design – characteristics – Types – Random Sampling – Complex Random Sampling design

#### **Unit-IV Application of Statistics**

Testing hypothesis: Concept and calculations of the following: Descriptive statistics: Mean, Median, Mode and Standard deviation. Correlation: Pearson product moment correlation – spearman rank order correlation – Partial and multiple correlations – Regression analysis. Application of Statistical Software for relationship and prediction study. Statistical analysis through excel. Statistical software – SPSS and Vassarstat.

#### **Unit-V Research report writing**

Significance of Research Report Writing – Steps in Research report writing – Types of Reports, Mechanics of writing a Research report – Precautions for writing Research reports – thesis format – Chapterization – Tabulation – Graphs / Figures, Conclusion – Recommendation – Bibliography –appendices.

#### **TEXT BOOKS**

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,

#### **REFERENCE BOOKS / WEBSITES**

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

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Rothstein, Anne L. (1995) *Research Design and Statistics for Physical Education*. New Jersey: Prentice Hall.

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#### **Course outcomes**

- Provided the basic knowledge on relationship and prediction studies.
- Learned about variables and testing.
- Understood process of research including design to be used in relationship and prediction studies.
- Attained knowledge about the various types of statistics and its application in relationship and prediction studies.
- Preparing of research report was studied thoroughly.



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Credit-4

**CC-IV AREA OF RESEARCH d. Survey study (21MPLPE4D)**

**Objectives**

- To impart fundamental research concepts on survey studies.
- To know about survey methods.
- To understand the process of research including design used in survey studies.
- To train on application of statistics in survey studies.
- To provide an overview of research report writing.

**Unit-I Introduction to research**

Fundamental concepts: Meaning, need, nature, aim, objectives and scope of the topic – purpose, Justification and usefulness of the topic, statement of the problem, Hypothesis, Delimitations and Limitations, Front materials of the dissertation – Reviews.

**Unit-II Survey methods**

Methodology: survey study methods: Meaning, definition, assumptions – major steps – characteristics and sources - precaution in selecting an object of survey studies. Advantages and limitations. Collection of data from the case – parents – spouse – children – physical education teacher – coaches – co-players – Spectators & fans – society members' schedules and Questionnaire: Meaning of a schedule – types of schedule and steps in framing schedule – types of questionnaire: Meaning – forms – process – validity and reliability – advantages and limitations.

**Unit-III Research design**

Research Design – Meaning, need, importance – features – types. Principles of sampling – Population – size – steps in sampling design. Criteria for selecting a sampling design – characteristics – Types – Random Sampling – Complex Random Sampling design

**Unit-IV Application of Statistics**

Testing hypothesis: Concept and calculations of the following: Descriptive statistics: Mean, Median, Mode and Standard deviation. Correlation: Pearson product moment correlation – spearman rank order correlation – Chi-square – Factor analysis. Application of Statistical Software for survey study. Statistical analysis through excel. Statistical software – SPSS and Vassarstat.

**Unit-V Research report writing**

Significance of Research Report Writing – Steps in Research report writing – Types of Reports, Mechanics of writing a Research report – Precautions for writing Research reports– thesis format – Chapterization – Tabulation – Graphs / Figures, Conclusion – Recommendation – Bibliography –appendices.

**TEXT BOOKS**

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,

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Rothstein, Anne L. (1995) *Research Design and Statistics for Physical Education*. New Jersey: Prentice Hall.

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**Course outcomes**

- Provided the basic knowledge on survey studies.
- Learned about survey methods.
- Understood process of research including design to be used in survey studies.
- Attained knowledge about the various types of statistics and its application in survey studies.
- Preparing of research report was studied thoroughly.



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Part-I

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

Credit-4

### **CC-IV AREA OF RESEARCH e. Descriptive study (21MPLPE4E)**

#### **Objectives**

- To impart fundamental research concepts on descriptive studies.
- To know about variables and testing.
- To understand the process of research including design used in descriptive studies.
- To train on application of statistics in descriptive studies.
- To provide an overview of research report writing.

#### **Unit-I Introduction to research**

Fundamental concepts: Meaning, need, nature, aim, objectives and scope of the topic – purpose, Justification and usefulness of the topic, statement of the problem, Hypothesis, Delimitations and Limitations, Front materials of the dissertation – Reviews.

#### **Unit-II Variables and testing**

Methodology: Selection of subjects – variables – justification –scheduling - Apparatus and materials – tests – methods of testing.

#### **Unit-III Research design**

Research Design – Meaning, need, importance – features – types. Principles of sampling – Population – Steps of sampling design. Criteria for selecting a sampling design – characteristics – Types – size - Random Sampling – Complex Random Sampling design – Static group comparison design.

#### **Unit-IV Application of Statistics**

Testing hypothesis: Concept and calculations of the following: Descriptive statistics: Mean, Median, Mode and Standard deviation. Test for difference between mean; Independent 't' test One way Analysis of variance (ANOVA)- Factorial Design (ANOVA) – Two way, three way Repeated measures ANOVA. Post-hoc test: Scheffe's and Least Significant difference test (LSD) Construction of norms – Calculation and advantages of scoring scales: Sigma scale, Z scale, Hull scale. Application of Statistical Software for descriptive study. Statistical analysis through excel. Statistical software – SPSS and Vassarstat.

#### **Unit-V Research report writing**

Significance of Research Report Writing – Steps in Research report writing – Types of Reports, Mechanics of writing a Research report – Precautions for writing Research reports– thesis format – Chapterization – Tabulation – Graphs / Figures, Conclusion – Recommendation – Bibliography –appendices.

#### **TEXT BOOKS**

Best, John W and James V.Kahn. (1992) *Research in Education*. New Delhi: Prentice Hall of India,  
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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.  
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#### **Course outcomes**

- Provided the basic knowledge on descriptive studies.
- Learned about variables and testing.
- Understood process of research including design to be used in descriptive studies.
- Attained knowledge about the various types of statistics and its application in descriptive studies.
- Preparing of research report was studied thoroughly.





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***Department of Physical Education & Yoga***

Semester-II

Part-II

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

Credit-8

### **Part – II Dissertation**

The candidate is eligible to submit the dissertation only on completion of theory paper successfully. Each candidate has to present his / her research proposal using PPT during the colloquium in presence of all faculty members and other research scholars. The research topic of each candidate shall generally be approved at the end the colloquium. The guide allotment will be done by the department as per the existing practice. Each candidate has to work under the faculty (guide), approved by the department. The dissertation shall ordinarily be written in English. Each candidate should submission the dissertation to the department on or before last date prescribed, duly signed by the Guide and Head of the Department along with filled-in application and fee prescribed by the University. Candidates shall submit three copies of dissertation (two copies to the University and one copy to the guide) and the minimum and maximum page limited from 75 to 150 respectively and the dissertation be printed on one side of a paper and hard bound binding, to the department through the Supervisor and the Head of the Department not earlier than 5 months from the date of start of the second semester in the case of full-time programme.