



OFFICE OF THE REGISTRAR :: DIBRUGARH UNIVERSITY :: DIBRUGARH

Ref. No. DU/DR-A/Syllabus-Ph.D.(Phy.Edn.)/23/882

Date: 25.08.2023

NOTIFICATION

The 128th Meeting of the Academic Council, Dibrugarh University held on 30.06.2023 vide Resolution No. 26 has approved the *curriculum of the Ph.D. Pre-Registration Course Work in Physical Education with effect from the academic session 2023-2024*

A copy of the Syllabus is attached herewith.

Issued with due approval.

Abanika 25/08/2023
Deputy Registrar (Academic)
Dibrugarh University.

Copy to:

1. The Hon'ble Vice-Chancellor, Dibrugarh University for kind information.
2. The Deans, Dibrugarh University, for kind of information.
3. The Registrar i/c, Dibrugarh University for kind of information.
4. The Chairperson, Centre for Studies in Physical Education and Sports, Dibrugarh University, for information.
5. The Controller of Examinations i/c, Dibrugarh University for information.
6. The Programmer, Dibrugarh University, with a request to upload the notification and syllabus in the Dibrugarh University Website.
7. File.

Abanika 25/08/2023
Deputy Registrar (Academic)
Dibrugarh University

Curriculum of the Ph.D. Pre-Registration Course Work in Physical Education



**CENTRE FOR STUDIES IN PHYSICAL EDUCATION AND SPORTS
DIBRUGARH UNIVERSITY
DIBRUGARH, ASSAM**

**Course Structure and allotment of papers for Doctor of Philosophy (Ph.D.) in
Physical Education.**

Marks: 100(End Semester 60 and In-semester: 40)

Total Marks : 400 Credit 18				
Course	Course Code	Course Title	Total Marks	Credit
Core Course-I	PHDPE 10100	Research Methodology in Physical Education Research	100	4
Core Course-II	PHDPE 10200	Statistics in Physical Education Research	100	4
Optional Course IV (any one)	PHDPE 10300 (a)	Sports and Exercise Physiology	100	4
	PHDPE10300 (b)	Sports and Exercise Psychology	100	4
	PHDPE10300 (c)	Sports and Exercise Biomechanics	100	4
	PHDPE10300 (d)	Fitness and Wellness	100	4
	PHDPE10300 (e)	Yoga	100	4
	Or anyone need based course offered by the course teacher/supervisor			
Compulsory Course V	PHDPE 10400	Assignment	100	4
Compulsory	PHDPE 10500	Research and Publication Ethics (Common Curriculum to be provided by university)	50	2
		Total	400	18

<p style="text-align: center;">Course Work Curriculum for Ph.D. in Physical Education Core Course: I PHDPE 10100: Research Methodology in Physical Education Research Total Credit: 4 Total Marks: 100 Distribution of Marks (Semester End/Practical/Internal): [60/40] No. of Credit Hours and Module: 60 Hours & 04 Modules /Unit</p>			
<p>Objectives:</p> <ul style="list-style-type: none"> • To give student knowledge of Research in Physical Education • To acquaint the scholar with Philosophy of Research in Physical Education • To enable scholar with different data collection tools and the procedure of developing them • To enable the student to understand and apply different types and methods of research • To build capacity for analyzing data and drawing subject specific inferences and insights. 			
Unit	Topic	Contact Hours	Marks
I	<p>Basics of Research</p> <ul style="list-style-type: none"> • Meaning of Research, Classification and Steps of Research • Positivism vs Constructionism debate in research • Approach of Research: Qualitative and Quantitative • Hypothesis: Meaning and Types • Logic of Enquiry: Inductive and Deductive 		15
II	<p>Strategies and Designing Research</p> <ul style="list-style-type: none"> • Meaning and purpose of research design, types of research design • Experimental design – Different experimental designs and applicable statistical procedure – Control of experimental factors • Basic principles of experimental designs, Formulation of Research design • Research Tools: Characteristics, Types, Selection of appropriate tool • Construction and Standardization of tools-Reliability, Validity and Norms. 		15
III	<p>Data Collection and Processing & Interpretation</p> <ul style="list-style-type: none"> • Population and Sampling: Meaning, Types, Techniques; Determine sample size. • Design research tools: Questionnaire, Observation, case study, survey, interviews, scales and tests etc. • Measurement and scaling technique: flow diagram of hypotheses testing. • Use of instrument software to collect data. • Lab and field safety measures during data collection. 		15

IV	Report Writing and Evaluation		15
<ul style="list-style-type: none"> • Preparing Research Proposal • Mechanism of writing Research report/Thesis and method of presentation • Guidelines for writing research abstract • Reference styles (APA, MLA, CHICAGO), Reference management tools (Mendeley, Zotero) • Format of publication in research journals • Plagiarism and application of anti-plagiarism software (e.g. URKUND) <ul style="list-style-type: none"> • Barrow, H. M. (1979). Practical Approach to Measurement in Health & Physical Education. (3rd ed.). Philadelphia: Lee & Febigeer. • Best, J. W. & Kahn, J. V. (2006). Research in Education.(10th ed.). New Delhi: PHI • Clark, D. H. & Clark, H. H. (1979). Research process in Physical Education, recreation & health Englewood Cliffs: prentice Hall. • Garrett, H.E (2000) Statistics in Psychology and Education, Hyderabad: International BookBureau • J. P. Verma (2012) Using SPSS: An Interactive Hands - On Approach, Sage South Asia • J. P. Verma(2015) Repeated Measures Design for Empirical Researchers, Wiley-Blackwell • Jerry R Thomas & Jack K Nelson (2000) Research Methods in Physical Activities; Illonosis; Human Kinetics; • Johnson, B. & Christensen, L. (2008). Education Research, Quantitative, Qualitative and Mixed Approaches (3rd ed.). Sage Publication: England. • Kamlesh, M. L. (1999) Research Methodology in Physical Education and Sports, New Delhi • Kothari, C.R.(2008). Research Methodology: Methods and Techniques. Second Edition, NewAge International Publishers, New Delhi. • Miller, David. K. (2002). Measurement by the Physical Educator, New York: McGraw Hill companies. John & Nelson (1998) Practical Measurements for Evaluation in Physical Education, Delhi: Surjit Publication. • Rothstain A (1985) Research Design and Statistics for Physical Education, Englewood Cliffs:Prentice Hall, Inc • Sivarama Krishnan. S. (2006) Statistics for Physical Education, Delhi; Friends Publication • Sprint hall, R. C. (1997). Basic statistical Analysis. (5th ed.). USA: Allyn & Bacon • Thomas, J. R. & Nelson, J. K. (2001). Research Methods in Physical Education, (4th ed.). USA: Human Kinetics. 			

Core Course: II PHDPE 10200: Statistics in Physical Education Research Total Credit: 4 Total Marks: 100 Distribution of Marks (Semester End/Practical/Internal): [60/40] No. of Credit Hours and Module: 60 Hours & 04 Modules /Unit			
Objectives: <ul style="list-style-type: none"> • To understand and apply the statistics in research. • To organize the samples and sampling techniques relevant to the study. • To apply the statistics in research thesis for evaluation 			
I	Introduction <ul style="list-style-type: none"> • Types of Data: Qualitative data. Quantitative data and Assumption about data. • Statistical Decisions in Hypothesis Testing: Type I error and Type II error, Understanding the power of test and One-tailed and Two tailed test. • Descriptive Profile and Normal Distribution <ul style="list-style-type: none"> ○ Variance, Skewness, Kurtosis, Percentiles ○ Applications of Descriptive statistics, interpretation of the result. ○ Development of Normative Scales: Z-scale, T-Scale, 6 Sigma scale and Hull scale. • Assumption of Parametric Tests. <ul style="list-style-type: none"> ○ Common assumption of parametric test ○ Normality and its testing (with kolmogorov-Smirnov Test) 		15
II	Comparing mean with t-Test. <ul style="list-style-type: none"> • One Sample t-Test • Independent two sampled t-Test. • Paired t-Test (Repeated measures) Analysis of variance and Covariance. <ul style="list-style-type: none"> • The theory behind ANOVA, ANOVA assumption and Logic of F-ratio • One way ANOVA • Two way ANOVA • ANCOVA <ul style="list-style-type: none"> ○ Post hoc test Procedures. ○ Independence of the covariate and treatment effect. 		15
III	Non-Parametric Tests of Significance. <ul style="list-style-type: none"> • Chi-Square Test: One way and Two way Chi Square Test. • Mann Whitney U-Test. • Wilcoxon T-test (Signed-Ranked test) • Kruskal-Wallis H-test. • Friedman's Test 		15

	<p>Non- Parametric measures of Correlation</p> <ul style="list-style-type: none"> • Goodman's and Kruskal's Gamma • Correlation coefficient of nominal and arrange in a 2x2 table • Biserial correlation • Point biserial correlation • Tetra choric correlation • Lambda 		
IV	<p>Correlations</p> <ul style="list-style-type: none"> • Product Moment correlation coefficient • Correlation matrix • Partial correlation <ul style="list-style-type: none"> * Multiple correlation * Computation of partial correlation and multiple correlation • Interpretation of partial correlation and multiple correlation <p>Regression Analysis</p> <ul style="list-style-type: none"> • Understanding the Regression Equations • Methods of regression analysis • Simple linear regression analysis • Assumption of regression analysis • Computation of regression analysis • Interpretation of findings 		15
	<p>Practical:</p> <ul style="list-style-type: none"> • Using latest version of SPSS for calculating the various statistical techniques involved in parametric and non-parametric aspects. • Using excel for calculation of various statistical techniques involved in parametric and non-parametric aspects. 		
<p>References:</p> <ul style="list-style-type: none"> • Field, A (2013) Discovering Statistics Using IBM SPSS Statistics. London . SAGE Publication Limited. • Verma, J. (2011). Statistical Methods for Sports and Physical Education. New Delhi: Tata McGraw-Hill. • Verma, J. & Salam, A. (2012). Statistics for Psychology, New Delhi: Tata McGraw-Hill. • Verma, J., & Salam, A(2019). Testing Statistical Assumption in Research. Hoboken, USA: A Wiley. • Wilcox, R R (2009) Basics statistics Unverstanding Convernational Methods in modern Insight. New York, USA: OXFORD University Press • Winner, B.J. (1962). Statistical principles in Experimental Design. New York: McGraw Hill • Garrett Henry, E. (1981) Staistics in Psychology and Education, New York: McGraw 			

<p>Hill</p> <ul style="list-style-type: none"> • Heiman Gary, W. (1992) Basic Statistics for the behavioral Sciences, Boston: Houghton Milfflin Company. • Levin, Jack & Alan Fox, James (2000) Elementary Statistics in Social Research, London: Allyn & Bacon. • Verma, J.P. (2014) Statistics for Exercise Science and Health with Microsoft Office Excel, John Wiley, USA 			
<p>Optional Course PHDPE 10300 (a): SPORTS AND EXERCISE PHYSIOLOGY Total Credit: 4 Total Marks: 100 Distribution of Marks (Semester End/Practical/Internal): [60/40] No. of Credit Hours and Module: 60 Hours & 04 Modules /Unit</p>			
<p>Objectives:</p> <ul style="list-style-type: none"> • To understand the basic principles of physiology and Sports & Exercise Physiology • To apply the knowledge in the field of physical education and movement activity. • To analyze the practical knowledge during the practical situation. 			
Unit	Topic	Contact Hours	Marks
I	<ul style="list-style-type: none"> • Physiology of Endurance Performance: • Cardiovascular control during exercise, • Cardiovascular responses to endurance exercise, • Respiratory regulation during exercise, • Cardiovascular and respiratory adaptation to training. 		15
	<ul style="list-style-type: none"> • Physiology of Strength Performance • Generation of muscle force, • Factors influencing force generation, • Strength curve and rate of force development for various muscles • Physiological adaptation in response to resistance training, Delayed Onset Muscle Soreness(DOMS), Onset of Blood Lactate Accumulation (OBLA), Exercise Associated Muscle Cramps and Prevention (EAMC) 		15
	<p>Bio-Energetic and Exercise Metabolism</p> <ul style="list-style-type: none"> • Concept of Fuels to exercise and energy production • Metabolic responses to short-term exercise, Prolonged exercise, Incremental exercise • Metabolic equivalent (MET) • Second wind and EPOC (Excess Post-exercise Oxygen Consumption) • Mechanism of body temperature regulation, Physiological responses to exercise in acclimatization 		15
	<p>Biochemical and neuroendrological adaptations</p> <ul style="list-style-type: none"> • Biochemical aspect of metabolism before, during and after exercise • Lactate threshold • Blood hormone concentration, Hormonal regulation 		15

	<p>of exercise</p> <ul style="list-style-type: none"> • Ergogenic aids and sports • Introduction to Sports Genetics, Exercise induces signal transduction 		
<p>References:</p> <ul style="list-style-type: none"> • D. (1979). A Christine, M. D., (1999). <i>Physiology of Sports and Exercise</i>. USA: Human Kinetics. • Conley, M. (2000). <i>Bioenergetics of Exercise Training</i>. • T.R. Baechle, & R.W. Earle, (Eds.), <i>Essentials of Strength Training and Conditioning</i> (pp. 73-90). Champaign, IL: Human Kinetics. • David, R. M. (2005). <i>Drugs in Sports</i>, (4th Ed). Routledge Taylor and Francis Group. • Gupta, A. P. (2010). <i>Anatomy and Physiology</i>. Agra: SumitPrakashan. • Gupta, M. and Gupta, M. C. (1980). <i>Body and Anatomical Science</i>. Delhi: Swaran Printing Press. • Guyton, A.C. (1996). <i>Textbook of Medical Physiology</i>, 9th edition. Philadelphia: W.B. Saunders. • Hunter, M. <i>dictionary for physical educators</i>. In H. M. Borrow & R. McGee, (Eds.), <i>A Practical approach to measurement in Physical Education</i> (pp. 573-74). Philadelphia: Lea &Febiger. • Karpovich, P. V. (n.d.). <i>Physiology of Muscular Activity</i>. London: W.B. Saunders Co. • Lamb, G. S. (1982). <i>Essentials of Exercise Physiology</i>. Delhi: Surjeet Publication. • Moorthy, A. M. (2014). <i>Anatomy, Physiology and Health Education</i>. Karaikudi: Madalayam Publications. • Morehouse, L. E. & Miller, J. (1967). <i>Physiology of Exercise</i>. St. Louis: The C.V. Mosby Co. • Pearce, E. C. (1962). <i>Anatomy and Physiology for Nurses</i>. London: Faber & Faber Ltd. • Sharma, R. D. (1979). <i>Health and Physical Education</i>, Gupta Prakashan. • Singh, S. (1979). <i>Anatomy and Physiology and Health Education</i>. Ropar: Jeet Publications. 			
<p>Optional Course PHDPE 10300 (b): SPORTS AND EXERCISE PSYCHOLOGY Total Credit: 4 Total Marks: 100 Distribution of Marks (Semester End/Practical/Internal): [60/40] No. of Credit Hours and Module: 60 Hours & 04 Modules /Unit</p>			
<p>Objectives:</p> <ul style="list-style-type: none"> • To reflect upon motivational psychology as applied to sports activities • To formulate relevant constructs of exercise psychology • To understand the influence of psychological factors on involvement and performance in sport, exercise and physical education settings. 			
Unit	Topic	Contact Hours	Marks
	<p>Basics of Sport & Exercise Psychology</p> <ul style="list-style-type: none"> • Introduction: Meaning and Definition. Importance of Sport Psychology for Athletes, Coaches and other related to Sports Setting. • Biological foundation of behaviour: Structure and function of neuron, synapse and neurotransmitters 		15

	<ul style="list-style-type: none"> • Nervous System <ul style="list-style-type: none"> a) Central Nervous system: Structure and function of brain and spinal cord b) Autonomic Nervous System: Structure and function c) Peripheral Nervous System: Structure and function • Muscular and Glandular system: Types and functions • Genetics and Behaviour: Chromosomal anomalies; Nature-nurture controversy (Twin studies and adoption studies) 		
	<p>Personality and Performance</p> <ul style="list-style-type: none"> • Personality and Performance (Meaning, Definition and Structure of personality) • Genetic and Environmental Determinants of Personality and measurement. • Personality theories [Psychoanalysis, Humanistic, Trait Theories and models]Constitutional theories (Sheldon, Trait) and Social Learning (Bandura) • Personality and Performance in Sports (Ice Berg Profile by Morgan) 		15
	<p>Motivation and Performance</p> <ul style="list-style-type: none"> • Motivation & Goal Setting- Meaning, Definition and Structure of Motivation (Need, Drive)Biological basis of motivation. • Theories of motivation [Abraham Maslow, Need Achievement by McClelland] • Self- Determination model • Techniques for Developing Motivation, Goal Setting – Locke GST • Motivation-Performance Relationship 		15
	<p>Emotion and Performance</p> <ul style="list-style-type: none"> • Meaning and Definition of Emotion, Biological basis of emotion: The Limbic system, Hormonalregulation of behavior • Meaning, Definition of Anxiety, Types of Anxiety • Meaning, Definition and Nature of Arousal and Stress, Theories [Drive theory, Inverted –Utheory & IZOF] • Emotion and Performance Relationship 		15
<p>References</p> <ul style="list-style-type: none"> • Ball, D. W. & Loy, J. W. (1975).<i>Sport and social order; Contribution to the sociology of sport</i>. London: Addison Wesley Publishing Co., Inc. • Blair, J.& Simpson, R.(1962). <i>Educational psychology</i>, New York:McMillan Co. • Cratty, B. J.(1968). <i>Psychology and physical activity</i>. Eaglewood Cliffs. Prentice Hall. • Kamlesh, M.L. (1998). <i>Psychology in physical education and sport</i>. New Delhi:Metropolitan Book Co. • Loy, J. W., Kenyon, G. S. & McPherson, B. D. (1978). <i>Sport and social system</i>. London: Addison Wesley Publishing Company Inc. • Mathur, S.S., (1962). <i>Educational psychology</i>. Agra.VinodPustakMandir. 			

<ul style="list-style-type: none"> • Skinner, C. E., (1984.). <i>Education psychology</i>. New Delhi: Prentice Hall of India. • William, F. O.&Meyer, F. N. (1979). <i>A handbook of sociology</i>. New Delhi: Eurasia Publishing House Pvt Ltd. • P.D. Pathak, 2000 <i>Shiksha Manovidnyan</i>, Agra, Vinod Pustak Mandir • S. K. Mangal (2005) <i>Shiksha Manovidnyan</i>, Ludhiana, Tandan Publication books markets. 			
<p>Optional Course PHDPE 10300 (c): SPORTS AND EXERCISE BIOMECHANICS Total Credit: 4 Total Marks: 100 Distribution of Marks (Semester End/Practical/Internal): [60/40] No. of Credit Hours and Module: 60 Hours & 04 Modules /Unit</p>			
<p>Objectives:</p> <ul style="list-style-type: none"> • To enable student to understand the science of Biomechanics and kinesiology in relation to human performance • To enable student to analyze various fundamental movements and understanding the relevance of analysis • Identify the relationship between kinematic and kinetic as they relate to the human performance • Able to describe the cause and effect of various mechanics on Sports Performance. 			
Unit	Topic	Contact Hours	Marks
I	<p>Fundamentals of Biomechanics</p> <ul style="list-style-type: none"> • Definition of Biomechanics & Sports Biomechanics • Importance of Biomechanics for Physical Education Teacher, Coach & Athlete • Goals of Sports Biomechanics – Performance Enhancement, Technique, Equipment, Training, Injury Prevention and Rehabilitation • Trends in Biomechanics 		15
II	<p>Mechanical Concepts</p> <ul style="list-style-type: none"> • Force - Meaning, definition, types and its application to sports activities • Lever - Meaning, definition, types and its application to human body. • Newton's Laws of Motion – Meaning, definition and its application to sports activities. • Projectile – Factors influencing projectile trajectory 		15
III	<p>Analysis of Basic movements and Sports Skills</p> <ul style="list-style-type: none"> • Mechanical Analysis of Locomotion: Running, Walking, Jumping, • Skill Analysis of Track and Field Events • Skill Analysis of Various Sports Skills • Sports Equipments and Surfaces 		15
IV	<p>Video Analysis of Techniques and Skills</p> <ul style="list-style-type: none"> • Video Film Analysis - Cinematography and Videography • Tools of Biomechanical Analysis - Electrography and Dynamography - LED's and Electromagnetic Markers 		15

	- Force transducers and Pressure Sensors		
Suggested Readings:			
<ul style="list-style-type: none"> • Bunn, John W. Scientific Principles of Coaching, Second Edition. (Englewood cliffs, New Jersey: Prentice Hall, Inc. 1972) • Hall, Susan J. Basic Biomechanics, Fourth Edition (Boston etc. : WCB/MC Graw-Hill Companies,2004) • Hay, James G. The Biomechanics of Sports Techniques, Fourth Edition (Englewood cliffs, New Jersey; Prentice Hall, 1993) • Hay, James G. and Raid J. Gavin, Anatomy, Mechanics and Human motion, Second Edition(Englewood cliffs, New Jersey: Prentice Hall, 1988). • Kreighbaum, Ellen and Barthels. Biomechanics – A qualitative Approach for studying Human movement. Third edition (New York: MC millan publishing company, 1990) • Mc. Ginnis, Peter M. Biomechanics of Sport and Exercise, Second Edition (Champaign : Humankinetics publishers, 2005) • Rai Ramesh, Biomechanics – Mechanical Aspects of human motion (Mohali Punjab :AgrimPublication, 2003) • Robertson, D. Gordon E. et. al. Research Methods in Biomechanics. (Champaign etc : Humankinetics publishers, 2004) • Knudson, D. (2007). Fundamentals of Biomechanics. Chico, USA: Springer Publication. • Scott, M. G. Analysis of Human Motion. Newyork. 			
Optional Course PHDPE 10300 (d): FITNESS AND WELLNESS Total Credit: 4 Total Marks: 100 Distribution of Marks (Semester End/Practical/Internal): [60/40] No. of Credit Hours and Module: 60 Hours & 04 Modules /Unit			
Objectives:			
<ul style="list-style-type: none"> • To understand the modern concept of Health, Fitness and Wellness. • To understand the concept of holistic health through fitness and wellness • To orient students toward the approach of positive life style. • To develop competencies for profile development, exercise guidelines adherence. • To design different fitness training program for different age group and their application. • To understand the role of nutrition in health, fitness and wellness. 			
Unit	Topic	Contact Hours	Marks
I	Fitness and Wellness <ul style="list-style-type: none"> • Concept of Fitness and Wellness and their significant in modern times. • Dimension of Health and fitness. • Physical Fitness – Types of Physical Fitness and Components of Physical Fitness 		15
II	Fitness development <ul style="list-style-type: none"> • Concept and principles of Sports training, warm up and 		15

	cooling down. <ul style="list-style-type: none"> • Concept of Training variables :Intensity, Volume, Load, Frequency and density • Means of Fitness Development – Aerobic and Anaerobic Exercises • Exercises and Heart Rate Zones for Various Aerobic Exercise Intensities 		
III	Fitness Assessment <ul style="list-style-type: none"> • Standard Measurements (Height, Weight, Heart Rate and Blood Pressure) • Body Composition: (BMI, WHR, Waist Circumference and Body Fat Percentage) • Physical Fitness component assessment test 		15
IV	Nutrition and Exercise <ul style="list-style-type: none"> • Basic concept of Nutrition. Classification of Nutrition • Means and method of Calculation of Energy Expenditure and Dietary requirement • Concept of obesity, Principles of Diet Plan, Balanced diet • Exercise and Diet plan for Weight management , weight loss and weight Gain 		15
References <ul style="list-style-type: none"> • Christine. M. D. (1999). Physiology of sports and evercise.USA: Human Kinetics. • Conley, M. (2000). Bioenergetics of exercise training. . • David, R. M. (2005). Drugs in sports, (4th Ed). Routledge Taylor and Francis Group. • Jeyaprakash, C. S. , Sports Medicine, J.P. Brothers Pub., New l)elhi, 2003. • Khanna- G.L., (1990). Exercise physiology and sports medicine. Delhi, Lucky Enterprises. • Methew, D.K. & Fox. E.I. (1971). Physiological basis of physical education athletics. Philadelphia: W Saunders Co. • Pandey, P.K., (1987). Outline of sports medicine, New Delhi: J.P. Brothers Pub. • Williams, J. G. P. (1962), Sports medicine. London: Edward Arnold Ltd. • Sinku K. Singh (2018). Sports Injuries and Rehabilitations. <i>New Delhi: Khel Sahitya Kendra publishers and distributors</i> • Ghorpade S. Sonajirao (2018). Sports Medicine, Physiotherapy and Rehabilitation. <i>New Delhi: Khel Sahitya Kendra publishers and distributors</i> • Anju Ambast (2018). Prevention and Treatment of Sports Injuries. <i>New Delhi: Khel Sahitya Kendra publishers and distributors</i> • Hoshiyar Singh (2017). Athletics Care and Rehabilitation (New Syllabus). <i>New Delhi: Khel Sahitya Kendra publishers and distributors</i> • Parveen Kumar (2012). Introduction to Exercise Science. <i>New Delhi: Khel Sahitya Kendra publishers and distributors</i> 			
Optional Course PHDPE 10300 (e): YOGA Total Credit: 4 Total Marks: 100 Distribution of Marks (Semester End/Practical/Internal): [60/40] No. of Credit Hours and Module: 60 Hours & 04 Modules /Unit			

Objectives:			
<ul style="list-style-type: none"> • To increase the knowledge of the students about Yoga and holistic development. • To provide a practical knowledge on different yogic practices. • To give a glimpse of ancient Yoga Philosophy. • To impart some knowledge about the healing power of Yoga. 			
Unit	Topic	Contact Hours	Marks
I	Introduction of Yoga <ul style="list-style-type: none"> • Meaning and Definition of Yoga. • Concept of Yoga. • Misconceptions of Yoga. • Origin and Historical Development of Yoga. 		15
II	Philosophical Perspective of Yoga <ul style="list-style-type: none"> • Ashtanga Yoga • Patanjali; The Yoga Sutras • Yoga in Bhagavad Gita <ul style="list-style-type: none"> ❖ Karma Yoga, ❖ Raja Yoga, ❖ Jnana Yoga ❖ Bhakti Yoga 		15
III	Practical Application of Yoga <ul style="list-style-type: none"> • Principles of Yogic Practices. • Meaning of Asana, its classifications and principles. • Meaning of Pranayama, its types and principles. • Meaning of Kriya its types. 		15
IV	Yoga for health <ul style="list-style-type: none"> • Role of Yoga in Management of Stress. • Concept of Balanced Diet. • Concept of Yogic Diet • Meaning and Concept of Yoga Therapy. 		15
References:			
<ul style="list-style-type: none"> • Indian Philosophy Datta and Chatterjee • Yoga Darshan DR.S.V. Karandikar • Ancient Indian Culture: Edited by Mohan Chand, Department of Sanskrit And Literature Ramjas College, University of Delhi • Patanjali Yoga-Sutra: Dr. P.V. Karambelkar • Hatha Pradipika Dr. M.L.Gharote • Ghrenda Samhita Swami Digambarji. • Yoga for Stress Relief Bharat Thakur. • Managing Stress H.S. Srinivas • Food for Health Mool Raj • Aahar Vidnyam Satyapal 			