

Semester-VII
Bachelor in Physical Education and Sports with Honours

DISCIPLINE SPECIFIC COURSE (DSC)- RESEARCH PROCESS IN PHYSICAL EDUCATION

No. of Hours-60

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title	Credits	Credit distribution of the Course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/Practice		
DSC: Research process in Physical Education	4	0	0	0	Passed Class VI Sem	Nil

Bachelor in Physical Education and Sports with Honours

Programme: Bachelor in Physical Education and Sports with Honours	Year: IV	Semester: VII
Subject: Physical Education		
Course: DSC	Course Title: Research Process in Physical Education	
<p>Course Outcome:</p> <ul style="list-style-type: none"> • Students will understand the foundational principles of research, including hypothesis development, research design, data collection methods, and analysis techniques. • Students will learn about ethical considerations in research, including informed consent, confidentiality, and integrity in data collection and reporting. • Students will be able to select appropriate research designs (e.g., experimental, quasi-experimental, correlational) based on research questions and objectives. • Students will learn various data collection methods (e.g., surveys, interviews, observations, experiments) and understand their strengths, limitations, and applicability to different research contexts. 		

Credits: 4		107	Discipline Specific Course
Max. Marks: As per Univ. rules		Min. Passing Marks: As per Univ. rules	
Unit	Topic		No. of Hours
I	<ul style="list-style-type: none"> • Meaning and Definition of Research – Need, Nature and Scope of research in Physical Education. Classification of Research, Location of Research Problem, Criteria for selection of a problem, Qualities of a good researcher. 		15
II	<ul style="list-style-type: none"> • Descriptive Methods of Research; Survey Study, Case study, Introduction of Historical Research, Steps in Historical Research, Sources of Historical Research: Primary Data and Secondary Data, Historical Criticism: Internal Criticism and External Criticism. 		15
III	<ul style="list-style-type: none"> • Experimental Research – Meaning, Nature and Importance, Meaning of Variable, Types of Variables. Experimental Design - Single Group Design, Reverse Group Design, Repeated Measure Design, Static Group Comparison Design, Equated Group Design, Factorial Design. 		15
IV	<ul style="list-style-type: none"> • Meaning and Definition of Sample and Population. Types of Sampling; Probability Methods; Systematic Sampling, Cluster sampling, Stratified Sampling. Area Sampling – Multistage Sampling. Non- Probability Methods; Convenience Sample, Judgement Sampling, Quota Sampling. Chapterization of Thesis / Dissertation, Front Materials, Body of Thesis – Back materials. Method of Writing Research proposal, Thesis / Dissertation; Method of writing abstract and full paper for presenting in a conference and to publish in journals, Mechanics of writing Research Report, Footnote and Bibliography writing. 		15

Recommended Readings

- Best J. W (1971) Research in Education, New Jersey; Prentice Hall, Inc Clarke David.
- H & Clarke H, Harrison (1984) Research processes in Physical Education, New Jersey; Prentice Hall Inc. Craig Williams and Chris Wragg (2006)
- Data Analysis and Research for Sport and Exercise Science, Londonl Routledge Press Jerry R Thomas & Jack K Nelson (2000) Research Methods in Physical Activities; Illonosis; Human Kinetics; Kamlesh,
- M.L. (1999) Reserach Methodology in Physical Education and Sports, New Delhi Moses, A.K. (1995) Thesis Writing Format, Chennai; Poompugar Pathippagam Rothstain,
- A (1985) Research Design and Statistics for Physical Education, Englewood Cliffs: Prentice Hall, Inc Subramanian, R, Thirumalai Kumar S & Arumugam C (2010)
- Research Methods in Health, Physical Education and Sports, New Delhi; Friends Publication Moorthy A. M. Research Processes in Physical Education (2010); Friend Publication, New Delhi

Suggested Continuous Evaluation Methods: Assignment /Practical /Viva Voce/ Test/ Quiz (MCQ)/ Seminar/ Presentation/. Overall Performance throughout the Semester (includes attendance, Behavior/ Discipline, and participation in activities)

Suggested Equivalent Online Courses: SWAYAM, MOOCS, <https://vidyamintra.inflibnet.ac.in, egvankosh.ac.in>

Semester-VII
Bachelor in Physical Education and Sports with Honours

DISCIPLINE SPECIFIC ELECTIVE (DSE)- Tests, Measurements and Evaluation in Physical Education

No. of Hours-60

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title	Credits	Credit distribution of the Course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/Practice		
DSE: Tests, Measurements and Evaluation in Physical Education	4	0	0	0	Passed Class VI Sem	Nil

BACHELOR IN PHYSICAL EDUCATION AND SPORTS WITH HONOURS

Programme: Bachelor in Physical Education and Sports with Honours

Year: IV

Semester: VII
Paper: DSE

Subject: Physical Education

Course: DSE

Course Title: Tests, Measurements and Evaluation in Physical Education

Course Outcome:

After completing this course, the students will be able to-

- Understand the advance concepts of Test & Measurement & Evaluation.
- Get equipped with the knowledge in depth about Criterion, and Administration of Test.
- Practical Experience of Physical Fitness, Motor Fitness and Sports Skill Tests.

Credits: 4	109	Discipline Specific Course
Max. Marks: As per Univ. rules		Min. Passing Marks: As per Univ. rules
Unit	Topic	No. of Hours
I	<ul style="list-style-type: none"> • Meaning and Definition of Test, Measurement and Evaluation. Need and Importance of Measurement and Evaluation. • Criteria for Test Selection–Scientific Authenticity. Meaning, definition and establishing Validity, Reliability, Objectivity. Norms – Administrative Considerations. • Physical Fitness Test: AAHPERD Health Related Fitness Battery (revised in 1984), ACSM Health Related Physical Fitness Test, Roger’s physical fitness Index. Cardiovascular test; Harvard step test, 12 minutes run/walk test, Multi-stage fitness test (Beep test) 	15
II	<ul style="list-style-type: none"> • Meaning and Definition of Motor Fitness. Test for Motor Fitness; Indiana Motor Fitness Test (For elementary and high school boys, girls and College Men) Oregon Motor Fitness Test • (Separately for boys and girls) –JCR test. Motor Ability; Barrow Motor Ability Test– Newton Motor Ability Test–Muscular Fitness–Kraus Weber Minimum Muscular Fitness Test. 	15
III	<ul style="list-style-type: none"> • Physiological Testing: Aerobic Capacity: The Bruce Treadmill Test Protocol, 1.5 Mile Run test for college age males and females. • Anaerobic Capacity: Margaria-Kalamen test, Vertical Jump Anthropometric Measurements: Method of Measuring Height: Standing Height, Sitting Height. Method of measuring Circumference: Arm, Waist, Hip, Thigh. Method of Measuring Skinfolts: Triceps, Subscapular, Suprailiac. 	15
IV	<ul style="list-style-type: none"> • Specific Spots Skill Test: Badminton: Miller Wal l Volley Test. Basketball: Johnson Basketball Test, Harrison Basketball Ability Test. Hockey: Friendel Field Hockey Test, Harban’s Hockey Test, Volleyball, Russel Lange Volleyball Test, Brady Volleyball Test. Football: Johnson Soccer Test, McDonald Volley Soccer Test. Tennis: Dyer Tennis Test. 	15

Recommended Readings

- Authors Guide(2013) ACSM’s Health Related Physical Fitness Assessment Manual, USA: ACSM Publications
- Collins, R.D. & Hodges P.B.(2001). A Comprehensive Guide to Sports Skills Tests and Measurement (2ndedition) Lanham:ScarecrowPress
- CuretonT.K. (1947) Physical Fitness AppraisalandGuidance, St.Louis:TheC.MosbyCompany
- GetchellB(1979)PhysicalFitnessAWayofLife,2ndEditionNewYork,JohnWileyand Sons,Inc
- Jenson,Clayne Rand Cynthia, C. Hirst(1980)MeasurementinPhysicalEducation and Athletics,NewYork,MacmillanPublisingCo.Inc
- KansalD.K.(1996),“TestandMeasurementinSportsandPhysicalEducation,NewDelhi: DVSPublications
- Krishnamurthy(2007)EvaluationinPhysicalEducationandSports,NewDelhi;AjayVer maPublication
- Vivian H. Heyward (2005) Advance Fitness Assessment and Exercise Prescription, rd 3 Edition,Dallas TX: The Cooper Institute for Aerobics Research
- Yobu, A (2010), Test, Measurement and Evaluation in Physical Education in Physical Education and Sports.New Delhi;Friends Publications

Suggested Continuous Evaluation Methods: Assignment /Practical /Viva Voce/ Test/ Quiz (MCQ)/ Seminar/ Presentation/. Overall Performance throughout the Semester (includes attendance, Behavior/ Discipline, and participation in activities)

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Semester-VII
Bachelor in Physical Education and Sports with Honours

DISCIPLINE SPECIFIC ELECTIVE (DSE)- TEACHING METHODOLOGY IN PHYSICAL EDUCATION

No. of Hours-60

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title	Credits	Credit distribution of the Course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/Practice		
DSE: Teaching Methodology in Physical Education	4	0	0	0	Passed Class VI Sem	Nil

BACHELOR IN PHYSICAL EDUCATION AND SPORTS WITH HONOURS

Programme: Bachelor in Physical Education and Sports with Honours	Year: IV	Semester: VII
Subject: Physical Education		
Course: DSE	Course Title: Teaching Methodology in Physical Education	
<p>Course Outcome:</p> <ul style="list-style-type: none"> • Students will understand the theoretical principles of teaching and learning in physical education, including constructivism, behaviorism, and socio-cultural perspectives. • Students will recognize different learning styles and preferences among students and adapt teaching methods to accommodate diverse learning needs. • Students will learn to design developmentally appropriate physical education curricula aligned with national standards and educational goals. • Students will learn to effectively demonstrate and model skills and techniques, providing clear visual examples for students to observe and emulate. 		

Credits: 4	111	Discipline Specific Electives
Max. Marks: As per Univ. rules		Min. Passing Marks: As per Univ. rules
Unit	Topic	No. of Hours
I	<p>(A) Meaning Meaning of the term "teaching method" its scope and importance, The factors to be considered in determining the method of teaching.</p> <p>(B) Types of method Part-whole method, whole part method, command method, discussion method, project method, demonstration method, imitation method, Principles of teaching</p>	15
II	<p>Presentation Techniques</p> <ul style="list-style-type: none"> Personal preparation, Technical preparation, Steps of presentation, Command and their techniques, Situation which require different words of command, Types of class management. 	15
III	<p>Lesson planning</p> <ul style="list-style-type: none"> Types of lesson planning: - General lesson plan, coaching lesson plan, Classroom teaching lesson plan, Objectives of different lesson plans and part of the lesson introductory and development, Skill practice/group work, Class activity/recreation part (reassembly revision and dismissal). 	15
IV	<p>Organization and conduct of competitions</p> <ul style="list-style-type: none"> Tracks and field, Gymnastics., Weight lifting, body building and best physique contest, Wrestling and combative games, Swimming, diving -aquatics, Games and sports tournaments. 	15

Recommended Readings

- Tirunaryanan, c. and hariharan, s. methods in physical education, karai kudi south india press, 1962.
- Kozman, b. cassidy, rosalind and jakson, c.d., methods in physical education, london: w.b. saunders company, 1960.
- Knapp, clyde and hagman, e.p. teaching methods for physical education, new york: mcgraw hill book co., 1948

Suggested Continuous Evaluation Methods: Assignment /Practical /Viva Voce/ Test/ Quiz (MCQ)/ Seminar/ Presentation/. Overall Performance throughout the Semester (includes attendance, Behavior/ Discipline, and participation in activities)

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Semester-VII
Bachelor in Physical Education and Sports with Honours

DISCIPLINE SPECIFIC ELECTIVE (DSE)- Track Events and Marathons

No. of Hours-60

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title	Credits	Credit distribution of the Course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/Practice		
DSE: Track Events and Marathons	4	0	0	4	Passed Class VI Sem	Nil

BACHELOR IN PHYSICAL EDUCATION AND SPORTS WITH HONOURS

Programme: Bachelor in Physical Education and Sports with Honours		Year: IV	Semester: VII
Subject: Physical Education			
Course: DSE	Course Title: Track Events and Marathons		
<p>Course Outcome:</p> <ul style="list-style-type: none"> • Understanding the Fundamentals – Gain in-depth knowledge of various track events, including sprints, middle-distance, long-distance races, and marathons, along with their historical and technical aspects. • Skill Development and Performance Enhancement – Learn and apply correct sprinting, running, and finishing techniques, improving speed, endurance, and race strategies through scientific training methods. • Officiating and Event Management – Develop the ability to officiate track events, understand race rules and regulations, and efficiently organize athletic meets and marathon races. • Application of Sports Science – Apply principles of biomechanics, physiology, and nutrition to optimize performance, prevent injuries, and enhance recovery in track and marathon running. 			

Credits: 4	113	Discipline Specific Electives
Max. Marks: As per Univ. rules		Min. Passing Marks: As per Univ. rules
Unit	Topic	No. of Hours
I	<ul style="list-style-type: none"> History and Evolution of Track Events Classification of Track Events: Sprints, Middle Distance, and Long-Distance Races Track Layout and Marking (100m, 200m, 400m, 800m, 1500m, 5000m, 10,000m) Rules and Regulations (World Athletics and AFI Guidelines) 	15
II	<ul style="list-style-type: none"> Fundamentals of Sprinting Techniques (Acceleration, Stride Length, Frequency) Block Starts and Finishing Techniques Training Methods for Sprinting and Middle-Distance Events Common Errors and Correction Strategies in Sprinting 	15
III	<ul style="list-style-type: none"> Physiological Demands of Long-Distance Running Training Principles for Long-Distance and Marathon Runners Energy Systems and Nutritional Needs for Endurance Athletes Injury Prevention and Recovery Strategies 	15
IV	<ul style="list-style-type: none"> Race Strategies for Different Track Events Officiating and Judging Procedures in Track Events Conducting a Track Event: Planning and Organization Role of Technology in Track and Marathon Races 	15

Recommended Readings

- **Singh, Ajmer (2019).** *Essentials of Track and Field*. Khel Sahitya Kendra.
- **Kansal, D.K. (2008).** *A Textbook of Applied Measurement, Evaluation & Sports Training*. Sports & Spiritual Science Publications.
- **Sharma, V.K. (2015).** *Athletics and Track Events in India*. Sports Publication.
- **Mohan, V. (2018).** *Scientific Approach to Running and Marathon Training*. Sports Literature House.
- **Bisht, Dr. M.P. (2021).** *Advanced Training Methods for Athletics*. Khel Sahitya Kendra.
- **Jensen, C. R., & Fisher, A. G. (2000).** *Scientific Basis of Athletic Conditioning*. Lea & Febiger.
- **Hunter, J. S. (2019).** *The Science of Running: How to Find Your Limit and Train to Maximize Your Performance*. VeloPress.
- **Payton, C. & Bartlett, R. (2008).** *Biomechanical Evaluation of Movement in Sport and Exercise*. Routledge.
- **McArdle, W. D., Katch, F. I., & Katch, V. L. (2014).** *Exercise Physiology: Nutrition, Energy, and Human Performance*. Lippincott Williams & Wilkins.
- **IAAF (World Athletics). (2020).** *Coaching Manual for Track and Field Events*. World Athletics Publications.

Suggested Continuous Evaluation Methods: Assignment /Practical /Viva Voce/ Test/ Quiz (MCQ)/ Seminar/ Presentation/. Overall Performance throughout the Semester (includes attendance, Behavior/ Discipline, and participation in activities)

Suggested Equivalent Online Courses: SWAYAM, MOOCS, <https://vidyamintra.inflibnet.ac.in>, egyankosh.ac.in

Semester-VII

Bachelor of Physical Education and Sports with Honours

Academic Project

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title	Credits	Credit distribution of the Course		Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial/Fieldwork/ Practical/Practice		
DISSERTATION	6			Physical Education in Bachelor of Arts	Nil

Bachelor in Physical Education and Sports with Honours

Programme : Bachelor in Physical Education and Sports with Honours		Year: IV	Semester: VII Paper: Dissertation
Subject: Physical Education			
Course: Academic Project	Course Title: Academic Project		
Course Outcomes:			
After studying this course, the students will be able to:			
<ul style="list-style-type: none"> • Develop advanced research skills, including the ability to formulate research questions, design methodologies, gather and analyze data, and draw meaningful conclusions. • Enhance their critical thinking abilities through the evaluation and synthesis of existing literature, identification of gaps in current knowledge, and the development of innovative approaches to their research topic. • Demonstrate the ability to work independently, manage their time effectively, and take responsibility for their own learning and research process. • Develop problem-solving skills by addressing challenges and obstacles encountered during the research process. • Cultivate an understanding of ethical considerations in research, including issues related to plagiarism, and responsible conduct of research. 			
Credits: 6		Dissertation	
Max. Marks: As per Univ. rules		Min. Passing Marks: As per Univ. rules	

Unit	Topic	No. of
		Hours
Unit I	Dissertation on Major OR Dissertation on Minor OR Academic Project/Entrepreneurship	90

Recommended Readings

- Research Methods in Physical Activity" by Jerry R. Thomas, Jack K. Nelson, and Stephen J. Silverman
- *Essentials of Research Methods in Health, Physical Education, Exercise Science, and Recreation*" by Kris E. Berg and Richard W. Latin
- Qualitative Research in Physical Activity and the Health Professions" by William A. Pitney and Jenny Parker

Suggested Continuous Evaluation Methods: Assignment /Practical /Viva Voce/ Test/ Quiz (MCQ)/ Seminar/ Presentation/. Overall Performance throughout the Semester (includes attendance, Behavior/ Discipline, and participation in activities)

Suggested Equivalent OnlineCourses: SWAYAM, MOOCS, <https://vidyamintra.inflibnet.ac.in>, egyankosh.ac.in

Semester-VIII**Bachelor in Physical Education and Sports with Honours****DISCIPLINE SPECIFIC COURSE (DSC)- Yogic Science****No. of Hours-60****CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course Title	Credits	Credit distribution of the Course			Eligibility criteria	Pre-requisite of the course(if any)
		Lecture	Tutorial	Practical/Practice		
DSC: Yogic Science	4	4	0	0	Passed Class VII Sem	Nil

Bachelor in Physical Education and Sports with Honours**Programme : Bachelor of Physical Education and Sports with Honours****Year: IV****Semester: VIII
Paper: DSC****Subject: Physical Education****Course: DSC****Course Title: Yogic Science****Course Outcomes:**

- Gain knowledge of the history, philosophy, and principles of Yoga as per ancient texts like Patanjali's Yoga Sutras, Bhagavad Gita, and Hatha Yoga Pradipika.
- Develop the ability to perform and instruct fundamental asanas, pranayama, meditation, and kriyas for physical and mental well-being.
- Understand the physiological, psychological, and therapeutic benefits of Yoga for stress management, rehabilitation, and overall health improvement.
- Apply yogic principles to enhance personal and professional life, promoting holistic wellness and a balanced lifestyle.

Credits: 4**Discipline Specific Course****Max. Marks: As per Univ. rules****Min. Passing Marks: As per Univ. rules**

Unit	Topic	No. of Hours
Unit I	<ul style="list-style-type: none"> • Yogic Concept of Health: Meaning and definitions • Personal and Social Discipline through five Yamas (don'ts) and five Niyama (do's). • Alternative Therapy: Basic principles of Ayurveda, Naturopathy. • Therapeutic importance of Dincharya and Ritucarya, • Concept of Aahara, Vihara, Aacharan and Vichara 	15
Unit II	<ul style="list-style-type: none"> • Significance of Yogasana & Pranayama • Basics of Therapeutic approaches of Hatha Yoga Practices given in different Hatha Yoga Texts (Hathapradipika, Gheranda Samhita, Shiva Samhita and Vasistha Samhita) • Intermediate and Advance Group of Asanas: Types, Techniques & Benefit, Pranayama, Nadi & Chakras: Types- Methods and benefits. • Knowledge of vital parameters to assess general state: Measurement of Blood • Pressure, Respiratory Rate, Pulse Rate and Body Temperature 	15
Unit III	<ul style="list-style-type: none"> • Musculo-Skeletal Disorders • Respiratory Disorders • Cardiovascular Disorders • Endocrine & Metabolic Disorders: • Psychological and Psychiatric Disorder 	15
Unit IV	<ul style="list-style-type: none"> • Concept of diet in Traditional Yogic Texts • Types of diet in Traditional Yogic Text □ Role of Yogic diet in health and disease. • Preparation of Therapeutic charts • Assessment of Nutritional status 	15

Recommended Readings

- Bhogal, R. S :: Yoga & Mental Health and beyond, ACE Enterprises, Madhu Rajnagar, Pune Road, Pune, 2010
- Brahmachari Swami Dharendra : Yogic Suksma Vyayama, Dharendra Yoga Publications, New Delhi
- Coulter, H. D. (2012). Anatomy of Hatha Yoga: a manual for students, teachers, and practitioners. Body and Breath.
- George Feuerstein, (1975). Text Book of Yoga. London: Motilal Bansaridass Publishers (P) Ltd.
- Gharote, M.L. : Teaching Methods for Yogic practices, Kaivalyadhama Ashram, Lonavla
- Gore, (1990), Anatomy and Physiology of Yogac Practices. Lonavata: Kanchan Prkashan. Helen Purperhart (2004), The Yoga Adventure for Children. Netherlands: A Hunter House book.
- Iyengar, B. K. S. : Light on Yoga, Harper Collins Publisher, New Delhi, 2005
- Iyengar, B.K.S : Yoga Shastra (Vol-I & II) Ramamani Iyenger Memorial Yoga, Institute, Pune YOG, Mumbai

Suggested Continuous Evaluation Methods: Assignment /Practical /Viva Voce/ Test/ Quiz (MCQ)/ Seminar/ Presentation/. Overall Performance throughout the Semester (includes attendance, Behavior/ Discipline, and participation in activities)

Suggested Equivalent OnlineCourses: SWAYAM, MOOCS, <https://vidyamintra.inflibnet.ac.in>, egyankosh.ac.in

Semester-VIII**Bachelor of Physical Education and Sports with Honours****DISCIPLINE SPECIFIC ELECTIVES (DSE)- STATISTICS IN PHYSICAL EDUCATION & SPORTS****No. of Hours-60****CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course Title	Credits	Credit distribution of the Course			Eligibility criteria	Pre-requisite of the course(if any)
		Lecture	Tutorial	Practical/Practice		
DSE: Statistics in Physical Education & Sports	4	4	0	0	Pass Sem VII	Nil

Bachelor in Physical Education and Sports with Honours

Programme : Bachelor in Physical Education and Sports with Honours		Year: IV	Semester: VIII Paper DSE
Subject: Physical Education			
Course: DSE	Course Title: Statistics in Physical Education & Sports		
Course Outcomes:			
<ul style="list-style-type: none"> • Students will understand basic statistical concepts, including mean, median, mode, variance, standard deviation, and distribution types, and their relevance in physical education and sports contexts. • Students will grasp the fundamental principles of probability theory and its applications in predicting outcomes in sports and physical education scenarios. • Students will learn various methods for collecting data in physical education and sports settings, including surveys, observational methods, and experimental designs. • Students will use descriptive statistics to summarize and describe data, providing a clear overview of key metrics and trends in physical education and sports research. • Students will understand different research designs, including experimental, quasi-experimental, and non-experimental designs, and their appropriate use in physical education and sports research. 			
Credits: 4		Discipline Specific Elective	

Max. Marks: As per univ. rules		Min. Passing Marks: As per Univ. rules
Unit	Topic	No. of Hours
Unit I	<ul style="list-style-type: none"> Meaning and Definition of Statistics.,Function, need and importance of Statistics. Types of Statistics. Meaning of the terms, Population, Sample, Data, types of data. Variables; Discrete, Continuous. Parametric and non- parametric statistics. 	15
Unit II	<ul style="list-style-type: none"> Data Classification, Tabulation and Measures of Central Tendency Meaning, uses and construction of frequency table. 	15
Unit III	<ul style="list-style-type: none"> Measures of Dispersions and Scales Meaning, Purpose, Calculation and advances of Range, Quartile, Deviation, Mean Deviation, Standard Deviation 	15
Unit IV	<ul style="list-style-type: none"> Probability Distributions and Graphs Normal Curve. Meaning of probability- Principles of normal curve – Properties of normal curve. Divergence from normality –Skewness and Kurtosis. Statistics Tests of significance; Independent “t” test, Dependent “t” test – chi – square test. level of confidence and interpretation of data. Meaning of correlation – coefficient of correlation. 	15

Recommended Readings

- Best J. W (1971) Research in Education, New Jersey; Prentice Hall, Inc Clark D.H. (1999)
- Research Problem in Physical Education 2nd edition, Eaglewood Cliffs, Prentice Hall, Inc.Jerry R Thomas & Jack K Nelson (2000)
- Research Methods in Physical Activities; Illonosis; Human Kinetics; Kamlesh, M. L. (1999)
- Reserach Methodology in Physical Education and Sports, New Delhi Rothstain A (1985)
- Research Design and Statistics for Physical Education, Englewood Cliffs: Prentice Hall, Inc Sivaramakrishnan. S. (2006)
- Statistics for Physical Education, Delhi; Friends Publication Thirumalaisamy (1998), Statistics in Physical Education, Karaikudi, Senthilkumar Publications.

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Semester-VIII

Bachelor of Physical Education and Sports with Honours

DISCIPLINE SPECIFIC ELECTIVES (DSE)- Athletic Care & Rehabilitation

No. of Hours-60

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title	Credits	Credit distribution of the Course			Eligibility criteria	Pre-requisite of the Course (if any)
		Lecture	Tutorial	Practical/Practice		
DSE: Athletic Care & Rehabilitation	4	4	0	0	Pass Sem VII	Nil

Bachelor in Physical Education and Sports with Honours

Programme : Bachelor in Physical Education and Sports with Honours

Year: IV

Semester: VIII
Paper DSE

Subject: Physical Education

Course: DSE

Course Title: Athletic Care & Rehabilitation

Course Outcomes:

- The student will gain practical as well as theoretical knowledge about care of athletes.
- The student will gain knowledge and practical about therapeutic modalities which helps in rehabilitation process.
- The student will learn about different types of corrective exercises for the athletes rehabilitation.

Credits: 4

Discipline Specific Elective

Max. Marks: As per univ. rules

Min. Passing Marks: As per Univ. rules

Unit

Topic

No. of Hours

Unit I

- Definition and objectives of corrective physical Education.

15

	<ul style="list-style-type: none"> • Posture and body mechanics, Standards of Standing Posture. • Value of good posture, Drawbacks and causes of bad posture. Posture test – Examination of the spine. 	
Unit II	<ul style="list-style-type: none"> • Normal curve of the spine and its utility, Deviations in posture: Kyphosis, lordosis, flat back, Scoliosis, round shoulders, • Knock Knee, Bow leg, Flat foot. • Causes for deviations and treatment including exercises. • Passive, Active, Assisted, Resisted exercise for Rehabilitation, Stretching, PNF techniques and principles. 	15
Unit III	<ul style="list-style-type: none"> • Brief history of massage – Massage as an aid for relaxation – Points to be considered in giving massage – Physiological, Chemical, Psychological effects of massage – Indication/Contraindication of Massage • Classification of the manipulation used massage and their specific uses in the human body – Stroking manipulation: Effleurage-Pressure manipulation: Petrissage Kneading (Finger, Kneading, Circular) ironing Skin Rolling – Percussion manipulation: Tapotement, Hacking, Clapping, Beating, Pounding, Slapping, Cupping, Poking, Shaking Manipulation, Deep massage. 	15
Unit IV	<ul style="list-style-type: none"> • Principles pertaining to the prevention of Sports injuries – care and treatment of exposed and unexposed injuries in sports – Principles of apply cold and heat, infrared rays – Ultrasonic, Therapy – Short wave diathermy therapy. Principles and techniques of Strapping and Bandages, Contrast Bath, Paraffin Bath. 	15

Recommended Readings

- Doherty. J. Meno. Wetb, Moder D (2000) Track & Field, Englewood Cliffs, Prentice Hal Inc. Lace, M. V. (1951) Massage and Medical Gymnastics, London: J & A Churchill Ltd.
- Mc Ooyand Young (1954) Tests and Measurement, New York: Appleton Century.
- Naro, C. L. (1967) Manual of Massage and, Movement, London: Febra and Febra Ltd.
 - Rathbome, J.I. (1965) Corrective Physical education, London: W.B. Saunders & Co.
 - Stafford and Kelly, (1968) Preventive and Corrective Physical Education, New York.

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Semester-VIII
Bachelor in Physical Education and Sports with Honours

DISCIPLINE SPECIFIC ELECTIVE (DSE)- Athletics Field and Combined Events

No. of Hours-60

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title	Credits	Credit distribution of the Course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/Practice		
DSE: Athletics Field and Combined Events	4	0	0	4	Pass Sem VII	Nil

BACHELOR IN PHYSICAL EDUCATION AND SPORTS WITH HONOURS

Programme: Bachelor in Physical Education and Sports with Honours	Year: IV	Semester: VIII Paper: DSE
Subject: Physical Education		
Course: DSE	Course Title: Athletics Field and Combined Events	
<p>Course Outcome:</p> <ul style="list-style-type: none"> • Understanding the Fundamentals – Gain in-depth knowledge of various track events, including sprints, middle-distance, long-distance races, and marathons, along with their historical and technical aspects. • Skill Development and Performance Enhancement – Learn and apply correct sprinting, running, and finishing techniques, improving speed, endurance, and race strategies through scientific training methods. • Officiating and Event Management – Develop the ability to officiate track events, understand race rules and regulations, and efficiently organize athletic meets and marathon races. • Application of Sports Science – Apply principles of biomechanics, physiology, and nutrition to optimize performance, prevent injuries, and enhance recovery in track and marathon running. 		

Credits: 4	123	Discipline Specific Electives
Max. Marks: As per Univ. rules		Min. Passing Marks: As per Univ. rules
Unit	Topic	No. of Hours
I	<ul style="list-style-type: none"> History and Evolution of field Events Classification of Field Events: Jumping and Throwing Fundamental Techniques and Skills Required Equipment and Facilities for Field Events Safety Measures and Injury Prevention 	15
II	<ul style="list-style-type: none"> Long Jump: Phases (Approach, Take-off, Flight, Landing) and Techniques High Jump: Scissors, Straddle, and Fosbury Flop Techniques Triple Jump: Phases (Hop, Step, and Jump) and Execution Pole Vault: Equipment, Techniques, and Training Methods 	15
III	<ul style="list-style-type: none"> Shot Put: Glide and Rotational Techniques Discus Throw: Grip, Stance, and Rotational Technique Javelin Throw: Grip, Approach, and Release Technique Hammer Throw: Swinging, Turning, and Release Techniques Strength Training and Conditioning for Throwers 	15
IV	<ul style="list-style-type: none"> Decathlon (Men): Overview of 10 Events and Training Strategies Heptathlon (Women): Overview of 7 Events and Performance Optimization Scoring System and Point Calculation in Combined Events Psychological Preparation and Competition Strategies 	15

Recommended Readings

- **Singh, Ajmer (2019).** *Essentials of Track and Field*. Khel Sahitya Kendra.
- **Kansal, D.K. (2008).** *A Textbook of Applied Measurement, Evaluation & Sports Training*. Sports & Spiritual Science Publications.
- **Sharma, V.K. (2015).** *Athletics and Track Events in India*. Sports Publication.
- **Mohan, V. (2018).** *Scientific Approach to Running and Marathon Training*. Sports Literature House.
- **Bisht, Dr. M.P. (2021).** *Advanced Training Methods for Athletics*. Khel Sahitya Kendra.
- **Jensen, C. R., & Fisher, A. G. (2000).** *Scientific Basis of Athletic Conditioning*. Lea & Febiger.
- **Hunter, J. S. (2019).** *The Science of Running: How to Find Your Limit and Train to Maximize Your Performance*. VeloPress.
- **Payton, C. & Bartlett, R. (2008).** *Biomechanical Evaluation of Movement in Sport and Exercise*. Routledge.
- **McArdle, W. D., Katch, F. I., & Katch, V. L. (2014).** *Exercise Physiology: Nutrition, Energy, and Human Performance*. Lippincott Williams & Wilkins.
- **IAAF (World Athletics). (2020).** *Coaching Manual for Track and Field Events*. World Athletics Publications.

Suggested Continuous Evaluation Methods: Assignment /Practical /Viva Voce/ Test/ Quiz (MCQ)/ Seminar/ Presentation/. Overall Performance throughout the Semester (includes attendance, Behavior/ Discipline, and participation in activities)

Suggested Equivalent Online Courses: SWAYAM, MOOCS, <https://vidyamintra.inflibnet.ac.in>, egyankosh.ac.in

Semester-VIII

Bachelor in Physical Education and Sports with Honours

DISSERTATION

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title	Credits	Credit distribution of the Course		Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial/Fieldwork/ Practical/Practice		
DISSERTATION	6			Pass Sem VII	Nil

Bachelor in Physical Education and Sports with Honours

Programme : Bachelor in Physical Education and Sports with Honours		Year: IV	Semester: VIII Paper: Dissertation
Subject: Physical Education			
Course: DISSERTATION	Course Title: Dissertation		
Course Outcomes:			
After studying this course, the students will be able to:			
<ul style="list-style-type: none"> • Develop advanced research skills, including the ability to formulate research questions, design methodologies, gather and analyze data, and draw meaningful conclusions. • Enhance their critical thinking abilities through the evaluation and synthesis of existing literature, identification of gaps in current knowledge, and the development of innovative approaches to their research topic. • Demonstrate the ability to work independently, manage their time effectively, and take responsibility for their own learning and research process. • Develop problem-solving skills by addressing challenges and obstacles encountered during the research process. • Cultivate an understanding of ethical considerations in research, including issues related to plagiarism, and responsible conduct of research. 			
Credits: 6		Dissertation	
Max. Marks: As per Univ. rules		Min. Passing Marks: As per Univ. rules	
Unit	Topic	No. of	

		Hours
Unit I	Dissertation on Major OR Dissertation on Minor OR Academic Project/Entrepreneurship	

Recommended Readings

- Research Methods in Physical Activity" by Jerry R. Thomas, Jack K. Nelson, and Stephen J. Silverman
- *Essentials of Research Methods in Health, Physical Education, Exercise Science, and Recreation*" by Kris E. Berg and Richard W. Latin
- Qualitative Research in Physical Activity and the Health Professions" by William A. Pitney and Jenny Parker

Suggested Continuous Evaluation Methods: Assignment /Practical /Viva Voce/ Test/ Quiz (MCQ)/ Seminar/ Presentation/. Overall Performance throughout the Semester (includes attendance, Behavior/ Discipline, and participation in activities)

Suggested Equivalent OnlineCourses: SWAYAM, MOOCS, <https://vidyamintra.inflibnet.ac.in>, egyankosh.ac.in