SIDDHARTH UNIVERSITY

KAPILVASTU,

SIDDHARTHNAGAR

Physical Education

3 + 1 (FOUR YEAR UG) CBCS PROGRAM

B.A. / B.Sc. (PHYSICAL EDUCATION)

To be implemented from Session 2026-27

Board of Studies Meeting on 24.09.2026

COURSE STRUCTURE FOR MAJOR SUBJECT
PHYSICAL EDUCATION – at U.G. level
(for B.A. / B.Sc.)

SEMESTER – WISE TITLES OF THE PAPERS IN U.G. PHYSICAL EDUCATION PROGRAM			
YEAR	COURSE CODE	COURSE TITLE	CREDITS
B.A./B.Sc. First Year		**Semester – I**	
		Elements of Physical Education	4+0
		Physical Fitness	0+2
		Semester – II	
		Sports Organization and Management	4+0
		Sports Events and Athletics	0+2
B.A./B.Sc. Second Year		**Semester – III**	
		Anatomy And Physiology	4+0
		Health And Physiology	0+2
		Semester – IV	
		Methods, Test and Measurement in Physical Education	4+0
		Measurement Of Sports Grounds and Courts	0+2
B.A./B.Sc. Third Year		**Semester – V**	
		Health Education	4+0
		Sports Training	4+0
		Correctives And Rehabilitation	0+2
		Semester – VI	
		Kinesiology And Biomechanics	4+0
		Yoga Education	4+0
		Educational Tour / Yoga Training Camp/ Project Work	0+2

Group A: For UG Honors

YEAR	COURSE CODE	COURSE TITLE	CREDITS
B.A./B.Sc. Fourth Year		**Semester – VII**	
		Research and Statistics in Physical Education and Sports Sciences	4+0
		Computer Application in Physical Education	4+0
		Sports Psychology and Sociology	4+0
		Contemporary Issues in Physical Education, Fitness & Wellness	4+0
		Sports Practical	0+4

	Semester – VIII		
		Sports Nutrition and Weight Management	4+0
		Educational Technology and Methods of Teaching in Physical Education	4+0
		Olympic Movement	4+0
		Officiating and Coaching	4+0
		Sports Practical	0+4

OR

Group B: UG Honors with Research (for students who secured 75% Marks in first six semesters)

YEAR	COURSE CODE	COURSE TITLE	CREDITS
B.A./B.Sc. Fourth Year	**Semester – VII**		
		Research and Statistics in Physical Education and Sports Sciences	4+0
		Computer Application in Physical Education	4+0
		Sports Psychology and Sociology	4+0
		Contemporary Issues in Physical Education, Fitness & Wellness	4+0
		Sports Practical	0+4
	Semester – VIII		
		Sports Nutrition and Weight Management	4+0
		Educational Technology and Methods of Teaching in Physical Education	4+0
		Research Project	12

PROGRAMME SPECIFIC OUTCOMES:

PSO 01	The students will be able to understand the basic and practical aspects of Physical Education, Yoga and Sports.
PSO 02	The students will be able to understand the biological, psychological, physical, health and functional aspects of human body.
PSO 03	This program aims to enable the students to understand and develop the mental & physical ability, management skills, leadership quality, health planning, event management, sports budgeting, physiological understanding, teaching methods, sports psychology and research orientation in physical education.
PSO 04	After completing this program, the students will definitely be able to successfully discharge their duties and responsibilities towards themselves and society.
PSO 05	This program also aims for the physical and sports skill development that may help for higher studies in physical education and may lead him/her to make a career in physical education and sports industry.
PSO 06	To understand the basic Research framework and nature of research in Physical Education and Sports.
PSO 07	Students shall be able to analyze the physical ability and performance of an individual in various sports.
PSO 08	To understand the relationship between Yoga, Health and Wellness.
PSO 09	To understand the management of modern physical education programs and sports activities.
PSO 10	To correlate the concept of ICT & Education in physical education and sports.
PSO 11	Student shall be able to know how to organize, manage and present statistical data. They will also be able to know the process of conducting research work.

SEMESTER I - PAPER I

Course code:	Year: First	Semester: First
Course Title: Elements of Physical Education		

Course Outcomes:

- The physical education is very wide concept and this course teaches about introduction and sociological concept of physical education.
- To understand the historical development of physical education in India and other countries.
- This course introduces about the general concept of good health and wellness.
- Will help the student to promote healthyway of living by developing fitness and health plan.

Unit	TOPICS	Credit
I	**Ancient Wisdom in Physical Education, Sports and Yoga:** ● Yoga- Meaning and Definition, Need and Importance of Yoga in Sports ● Ancient Physical Culture and Traditional Games of India. ● Meaning, definition and concept of physical education. ● Aims and objectives of Physical education.	4+0
II	**History of Physical Education:** ● History and development of Physical education in India. ● History of physical education in ancient Greece and Rome.	
III	**Sociological Foundation of Sports:** ● Meaning, Definition and importance of Sports Sociology. ● Culture and sports. ● Socialization and sports.	
IV	**Olympic Movement:** ● Olympic Movement: Ancient Olympic Games, Modern Olympic Games, Aims and Objectives of Olympic Games. ● Olympic Spirit, Olympic Torch, Olympic Flag, Olympic Motto.	
V	**Philosophies of Physical Education:** ● Idealism ● Naturalism ● Pragmatism	
VI	**Institutions of Physical Education and their Contribution in Physical Education and Sports:** ● YMCA, SAI, LNIPE ● IOA, IOC	
VII	**Awards:** ● Arjuna Award ● Rajeev Gandhi Khel Ratna Award ● Dronacharya Award ● Moulana Abul Kalam Azad (MAKA) Trophy	
VIII	**Meaning of the Terms:** ● Physical Culture, Physical Fitness, Physical Training ● Health Education, Drill, Sports and Games ● Contribution and scope of the term related to Physical Education.	

Suggested readings:

1. Uppal AK & Gautam GP (2008). Health & Physical Education. Friends Publication. New Delhi
2. Balayan D (2007). Swasthya Shiksha Evam Prathmik Chikitsa. Khel Sahitya. Delhi.
3. Barrow Harold M., "Man and movements principles of Physical Education", 1978.
4. Dynamics of fitness. Madison: W.C.B Brown.
5. Kamlesh M.L., "Physical Education, Facts and foundations", Faridabad Publications
6. Krishana Murthy V. and Paramesara Ram, N. "Educational Dimensions of Physical. Education", 2nd Revised edition, Print India, New Delhi 1990.
7. Ravanes R.S., "Foundation of Physical Education", Houghton Millin Co. Boston USA (1978)

SEMESTER I - PAPER II

Course Code: PHED - 102F	**Year: First**	**Semester: First**

Course Title: Physical Fitness

Course Outcomes:

- To understand the basic practical concepts of Physical Fitness and Yoga.
- To learn about Physical conditioning through various fitness work-out methods.
- To learn and understand Yogasanas and Pranayama.

Unit	Topics	Credits
I	**Part-A** **Introduction to Physical Fitness:** • Learn and demonstrate the techniques of warm-up, general exercise and cooling down • Learn and demonstrate physical fitness through aerobics, circuit training and calisthenics. • Diet chart & measurement of BMI	0+2
II	**Part-B** **Introduction of Yoga:** • Practical aspects of yoga. Surya Namaskar. **Asanas:** ● Learn any 04 asanas in standing position ● Learn any 04 asanas in sitting position ● Learn any 04 asanas in prone & any 04 asanas in supine position. **Pranayama**: • Learn to perform any 02 types of pranayama • Learn to perform any 01 Shudhi Kriya	

Suggested Readings:

1. Flyod, P.A., S.E. Mimms and C. Yelding (2003) Personal Health: Perspectives and Lifestyles, Thomson, Wadsworth, Belmont, California, USA.
2. Sharma JP (2007). Manav Jeevan Evam Yoga. Friends Publication. New Delhi.
3. Sharma Jai Prakash And Sehgal Madhu (2006). Yog-Shiksha. Friends Publication. Delhi.
4. Singh MK and Jain P (2008). Yoga aur Manoranjan. Khel Sahitya Kendra. New Delhi.
5. Vyas SK (2005). Yog Shiksha, Khel Sahitya Kendra, Delhi.

SEMESTER II - PAPER I

Course code:	**Year: First**	**Semester: Second**
Course Title: Sports Organization and Management		

Course Outcomes:

- This course is designed to give exposure to students in understanding the planning, organizing and implementation aspects of sports events.
- The students will also learn about store management, purchasing of material, budget making and career avenues in physical education.

Unit	Topics	Credits
I	**Introduction:** • Meaning, concept and definition of sports management. • Aims and objectives of sports management.	4+0
II	**Event Management** • Meaning and concept of event • Planning and management of sports event. • Steps in event management: Planning, Executing, Evaluating	
III	**Budget Part - A** ● Meaning, Definition, Preparation of Budget. ● Principles of making Budget ● Qualities of a good Budget.	
IV	**Budget Part - B** ● The Budget Cycle. ● The management of Income and Expenditure.	
V	**Organization** ● Meaning and definition of Organization. ● Need and importance of Organization. ● Structure and functions of SAI, University Sports Council and AIU	
VI	**Supervision** ● Meaning and Definition of Supervision. ● Principles and Methods of Supervision. ● Role of a sports coach/manager.	
VII	**Facilities & Equipment** ● Procedure to purchase sports goods and equipment. ● Care and maintenance of Equipment, Stock book ● Consumable and non-consumable sports goods	
VIII	**Job Opportunities** ● Job Opportunities in Physical Education and Sports. ● Career avenues and professional preparation. ● Clients and Sponsorship.	

Suggested readings:

1. Bucher, Charles A. and Krotee, March L., "Management of Physical Education and Sport," MC Grow Hill publication, New York (US) 2002
2. Hert, Renis (1961) New Patterns of Management, McGraw Hill,
3. Horine, Larry," Administration of Physical Education and Sport programs. WM-C Brown Publishers Dubuque (US) 1991
4. Kotler, P and G Allen, L.A. (1988) Management & Organization. Kogakusha Co. Tokyo.
5. Parkhouse, Bonnie L., "The management of Sports – its foundation and application," Mosby publication, St. Louis (US), 1991
6. Sandhu, K. Sports Dynamics: Psychology, Sociology and Management.
7. Sivia, G.S (1991). Sports Management in Universities, New Delhi: A.I.U. Deen Dayal Upadhyaya Marg.2005)

SEMESTER II - PAPER II

Course Code: PHED - 104F	Year: **First**	Semester: **Second**
Course Title: **Sports Events and Athletics**		

Course Outcomes:

- This course is designed to train the students for personal preparation and organising competitions.
- This course enables the students to understand and learn the rules, regulations and technical aspects of Athletics.

Unit	Topics	Credit
	Part-A	0+2
I	● To make a plan for organizing an event. ● To organize Intramural Competition. ● To prepare a budget plan for interclass competition. ● Make a Sample Time Table for college. ● Prepare the list of Consumable and Non- Consumable items. ● Prepare a Bio data/ curriculum vitae/ Covering Letter.	
	Part-B	
II	**<u>Athletics:</u>** ● History and Rules ● Measurements and Markings. ● Officials. ● World and National Records.	

Suggested Readings:

1. Parkhouse, Bonnie L., "The management of Sports – it's foundation and application," Mosby publication, St. Louis (US), 1991
2. Bucher, Charles A. and Krotee, March L., "Management of Physical Education and Sport," Mc Graw Hill publication, Now York (US) 2002
3. Horine, Larry," Administration of Physical Education and Sport programs. WM-C Brown Publishers Dubuque (US) 1991
4. Official websites of AIU, IOC, AAFI & IOC

SEMESTER III - PAPER I

Course Code:	Year: **Second**	Semester: **Third**
Course Title: **Anatomy and Physiology**		

Course outcomes:

- To understand the importance, scope and need of Anatomy & Physiology in the field of physical education and sports.
- To understand the basic structure and functions of various systems of the Human body.
- To understand anatomical and physiological effects of physical exercises on human body and on its various systems.

Unit	Topics	Credits
I	**Introduction:** • Meaning, Definition and Importance of Anatomy and Physiology in the field of Physical Education & Sports • Brief introduction of Cell, Tissues, Organs and various systems of human body.	4+0
II	**Skeletal System:** • Structural classification of bones. • Types of joints. • Functions of Skeletal System.	
III	**Muscular System:** • Classification, Structure and functions muscles. • Major group of muscles. • Effects of Exercise on Muscular and Skeletal System.	
IV	**Circulatory System:** • Structure and functions of human heart. • Functions of Blood and Mechanism of Blood Circulation. • Effects of exercise on Circulatory system.	
V	**Respiratory System:** • Organs, Structure and functions of respiratory system • Effects of exercise on respiratory system.	
VI	**Digestive System**: • Organs, Structure and functions of digestive system • Mechanism of Digestive System.	
VII	**Excretory and Nervous System:** • Structure and functions of Kidney, Functions of Skin. • Parts and Functions of Nervous System. • Effects of Exercise on Nervous System.	
VIII	**General Physiological Concepts:** • Capacities and Volumes of Lungs • Blood Counts, Blood pressure, cardiac output, Athlete's heart. • Relationship of Load, Recovery & Adaptation	

Suggested Readings:

1. Koley, Shyamal (2007), Exercise Physiology- A Basic Approach (New Delhi: Friends publications.
2. Jain AK (2002), Anatomy & Physiology for Nurses. Arya Publishers, Delhi.
3. Jain AK (2002), Anatomy & Physiology for Nurses. Arya Publishers, Delhi.
4. Moried EN (2007), Essential of Human Anatomy & Physiology. Ed. 8th Dorling Kindersley, India.
5. ACSM's Guidelines for Exercise Testing and Prescription (2001), American College of Sports Medicine, New York, U.S.A.
6. Goldberg, L. and D.L. Elliot (2000), The Healing Power of Exercise, National Health & Wellness Club, New York, U.S.A.
7. Prives M and Others (2004), Human Anatomy Vol. I & II Paragon, Delhi.
8. Seeley & Others (2008), Anatomy & Physiology. McGraw Hill, Boston.
9. Tortora, (2000) Principles of Anatomy & Physiology, New York: John Willy & Sons. 1.

SEMESTER III - PAPER II

Course Code:	**Year: Second**	**Semester: Third**
Course Title: **Health and Physiology**		

Course Outcomes:

- To understand the human body structure by means of preparing charts, models and learning human body measurement skills.
- To gain knowledge of First Aid and Rehabilitation through practical demonstration.

Unit	**Topics**	**Credits**
	Part-A	
I	• Draw a labeled diagram of any two-body systems. • Prepare a Model of any one System of human body. • Learn to measure basic physiological variables. • Learn to Measure Blood Pressure using Sphygmomanometer.	0+2
	Part-B	
II	**First Aid & Rehabilitation** • Definition of first aid, DRABC of first aid. • First aid for hemorrhage, fractures, Sprain and Strain. • PRICER • School Health Card, First Aid facilities. • Types of Rehabilitation.	

Suggested Readings:

1. Jain, J. (2004), Khel Dawaon Ka (New Delhi: Delhi University Press).
2. Robbins, G., D. Powers and S. Burgess), A Wellness Way of Life, McGraw Hill, New York, 2002.
3. Prives M and Others (2004), Human Anatomy Vol. I & II Paragon, Delhi.
4. Seeley & Others (2008), Anatomy & Physiology. McGraw Hill, Boston.
5. Health Education, Hygiene, First Aid & Sports Injuries by Dr. Neeraj Pratap Singh & Dr. Ajay Dubey, Sports Publication, New Delhi.

SEMESTER IV - PAPER I

Course Code:	Year: **Second**	Semester: **Fourth**
Course Title: **Methods, Test and Measurement in Physical Education**		

Course outcomes:

- To understand the basic teaching methods used in physical education
- To understand the criteria of test selection and its proper utilization.
- To learn the organization of tournaments and promotional activities.
- To learn the organization of various types of tests used in physical education and sports.

Unit	Topics	Credits
I	**Introduction** • Meaning and scope of Methods in Physical Education • Types of Teaching Methods • Factors affecting Teaching Methods	4+0
II	• Meaning and concept of test, Measurement and Evaluation • Importance of test and measurement in Physical Education	
III	**Tests** • Classification of tests • Criteria of test selection • Concept and assessment of physical fitness and motor fitness	
IV	**Audio Visual Aids** • Meaning and Importance of audio-visual aids in Physical Education • Types of audio-visual aids	
V	**Types of tournaments** • Knockout/elimination and League tournaments • Combination and Consolation tournaments • Types of Fixtures	
VI	**Promotional Activities** • Demonstration of sports activities • Sports meet and Exhibitions • Mass display and Play days	
VII	**Fitness Tests** • Physical fitness tests • Psychological Tests • Motor fitness Tests	
VIII	**Skill Tests** • Basketball and Volleyball • Football and Hockey • Badminton	

Suggested Readings:

1. Tirunarayan, C. and Harihar Sharma, S. "Methods in Physical Education". Printed at the south India Press, 1986
2. Karnakudi Singh Suja, "Methods in Physical Education." Twinkle Printing Press, Patiala.
3. M. L. Kamlesh, "Methods of Physical Education."
4. Devinder K. Kansal," Test Evaluation Accreditation Measurement and Standards" K. K. Publication, 2018.
5. S.K. Sharma," Measurement and Evaluation in Physical Education." Friends Publication, 2020

SEMESTER IV - PAPER II

Course Code:	**Year: Second**	**Semester: Fourth**

Course Title: **Measurement of Sports Grounds and Courts**

Course Outcomes:

- Student will be able to learn the layout and marking of sports grounds and courts.
- Student will be able to organize the tournaments.
- Students will be able to understand the officiating part of tournaments too.

Unit	**Topics**	**Credits**
	Part-A	
I	Learning the measurements, dimensions and markings of following: ● Basketball and Volleyball ● Football and Hockey ● Badminton and Table Tennis ● Kabaddi and Kho-Kho	0+2
	Part-B	
II	Learning the layout and making of the following ground / courts: • Large field games • Small field games • Indoor games and combative sports	

Suggested Readings:

1. Tirunarayan, C. and Harihar Sharma, S. "Methods in Physical Education". Printed at the south India Press, 1986
2. Karnakudi Singh Suja, "Methods in Physical Education." Twinkle Printing Press, Patiala.
3. M. L. Kamlesh, "Methods of Physical Education."
4. Devinder K. Kansal," Test Evaluation Accreditation Measurement and Standards" K. K. Publication, 2018.
5. S.K. Sharma," Measurement and Evaluation in Physical Education." Friends Publication, 2020.

SEMESTER V - PAPER I

Course Code:	Year: **Third**	Semester: **Fifth**
Course Title: **Health Education**		

Course outcomes:

- Student will improve their health literacy
- Student will improve their health behavior
- Student will come to know about cause and prevention of disease
- Student will come to know that they can build their career in health sector

Unit	Topics	Credits
I	**Introduction** • Meaning definition and importance of health education • Dimensions, spectrum and determinants of health • Principles of health education	4+0
II	**Communicable Diseases** • Meaning of Communicable diseases • Mode of transfusion, method of prevention. • Environmental problems and their effects on health	
III	**Healthcare** • Meaning of Health and Health care system. • Primary health care in India. • Health programs in India.	
IV	**Primary Health Care** • Elements of primary health care, principles of primary health care • Health care of the community, Concept and levels of health care	
V	**Nutrition and Health** • The dietary constituents of food. • Factors affecting nutritional status of an individual.	
VI	**Balance Diet** • Meaning, need & importance of Balanced Diet. • Principles of diet planning. • Deficiency diseases and their prevention.	
VII	**First Aid** • General principles of First aid. • Common first aid measures, Safety and precautions, First aid kit. • Major causes of accidents in sports and physical activities. • Personal qualities and functions of the first aider	
VIII	**Posture** • Modern concept of posture • Common postural deformities- their causes and remedial measures • Common sports injuries their classification and prevention	

Suggested Readings:

1. Physical activity for health and fitness, publication- human kinetics by- Allen W. Jacson, James R. Morrow, David W. Hill, Rod K. Dishman

2. डॉ. सुनील दत्त लखेरा, "स्वस्ृय एवं शारीररक शशक्षा" J.B.T. publication
3. डॉ श्याम नारायण शसंह, "स्वास्ृय शशक्षा" खेल साशहत्य केंद्र
4. Dr. Benu Gupta, Dr. Mukesh Agrawal, Dr. Sunita Arora, "Health Education, Anatomy and Physiology", Khel sahitya
5. G.D. Powers and S. Burgess Robbins, "A wellness way of life", Mc Graw hill, New York

SEMESTER V - PAPER II

Course Code:	Year: **Third**	Semester: **Fifth**
Course Title: **Sports Training**		

Course outcomes:

- Students will come to know about basic principles of sports training
- Students will come to know about how to prevent from injuries
- Students will come to know how to work for improving physical fitness
- Students will come to know about the career opportunities in coaching

Unit	Topics	Credits
I	**Introduction** • Meaning, definition and concept of sports training • Aim and objectives of sports training • Characteristics of sports training	4+0
II	**Training load** • Meaning of Load, degree of load, • Load and adaptation • Over load	
III	**Recovery** • Meaning of recovery, Phases of recovery • Factors affecting the pace of recovery • Relationship of Load & Recovery	
IV	**Basic Terminologies** • Warm up – General and Specific • Limbering down • Fatigue	
V	**Strength** • Meaning and types of strength • Factors determining strength	
VI	**Speed** • Meaning and types of speed • Factors determining speed	
VII	**Endurance** • Meaning and type of endurance • Factors determining endurance	

VIII	**Flexibility and Coordinative Abilities** • Meaning and type of Flexibility • Meaning and type of Coordinative Abilities • Factors determining Flexibility and Coordinative abilities	

Suggested Readings:

1. Science of sports training Dr. Hardayal Singh, Friends publication
2. Developing effective physical activity programs Lynda Ransdell, Mary K. Dinger, Jennifer Huberty, Kim Miller Human Kinetics (2009)
3. Sports training Prof. V. Satyanarayana sports publication (2018)
4. Sports training Dr. A.K. Uppal Friends publication (2019)
5. Periodization of sports training for sports Tundor O. Bompa, Carlo A. Buzzichelli Human Kinetics (2015)

SEMESTER V - PAPER III

Course Code:	**Year: Third**	**Semester: Fifth**

Course Title: **Correctives and Rehabilitation**

Course Outcomes:

- Students will improve understanding of health aspects of Posture
- Students will be able to identify postural deformities and their corrective exercises
- Students will be able to enhance rehabilitation skills
- Students will come to know about management of training methods

Unit	Topics	Credits
	Part-A	
I	Postural deformities and corrective measures: - Types and identification of postural deformities Corrective exercises for postural deformities Practical demonstration of exercise for mobilizing the shoulder, elbow, wrist, hip, knee, ankle and foot	0+2
	Part-B	
II	Preparation of training program for athletes Demonstration of warming up and limbering down techniques Demonstration of methods for development of various physical fitness components	

Suggested Readings:

1. Outlines of Sports Medicine, Dr. A.K. Pandey, Jaypee brothers.
2. Correctives, Therapeutic exercise, sports injuries and massage V.D. Bindal Friends publication (India) (2020).
3. Sports Medicine, Physiotherapy and Rehabilitation Pramod Kumar Friends Publication (India) (2019).
4. Clinical Assessment Skill for Physiotherapist, Gowrishankar Potturi, K.B. Ranjeet Singh Chaudhary, Neha Rastogi, Anjali Agrawal, CBS publication (2017)

SEMESTER VI - PAPER I

Course Code:	**Year: Third**	**Semester: Sixth**
Course Title: **Kinesiology and Biomechanics**		

Course outcomes:

- Students will be able to understand various aspects of Kinesiology and Biomechanics in Sports and able to apply them in sports activities.
- Students will learn about the locomotion aspects of Human body.
- Students will be able to understand the various mechanical principles and their applicability in different sports situations.

Unit	**Topics**	**Credits**
I	**Introduction:** • Meaning, Definitions, Aims & Objective of Kinesiology. • Importance of Kinesiology in Physical Education & Sports.	4+0
II	• Fundamental Movements of Human body. • Center of Gravity. • Line of Gravity.	
III	• Axis and Planes. • Types of Muscle Contraction.	
IV	**Major Muscles at Various Joints:** • Upper extremity – shoulder girdle, shoulder joint, elbow joint. • Lower extremity – Hip joint, knee joint, ankle joint. • Major muscles of Neck and Torso	
V	**Motion:** • Newton's Laws of Motion **Friction:** • Meaning, Definitions and Types.	
VI	**Force:** • Meaning, Definition & Types of Force. • Application of force in sports activities. **Levers:** • Meaning, concept & Definition of Levers. • Uses of Lever in the Human body movements and sports activities.	
VII	**Kinematics:** • Meaning of Kinematics. • Types- Linear and Angular. • Meaning of Speed, Velocity, Acceleration, Distance & Displacement	
VIII	**Kinetics:** • Meaning of Kinetics • Types- Linear and Angular. • Meaning of Mass, Weight, Momentum and Pressure.	

Recommended Readings:
1. Bartlett, R. (2007), Introduction to Sports Biomechanics. Routledge Publishers, USA.
2. Blazevich, A. (2007), Sports Biomechanics. A & C Black Publishers, USA.
3. Breer & Zarnicks (1979), Efficiency of human movement. WIB Sounders Co. USA.
4. Hamill, J. and Knutzen, K.M. (2003), Biomechanical Basis of Human Movement. Lippincott Williams and Wilkins, USA.
5. Hay (1993), The biomechanics of sports techniques, Prentice Hall Inc. New Jersey.
6. McGinnis, P. (2004), Biomechanics of Sports & Exercise. Human Kinetics, USA.
7. Oatis, C.A. (2008). Kinesiology, 2nd Ed. Lippincott, Williams & Wilkins, USA.

SEMESTER VI - PAPER II

Course Code:	**Year: Third**	**Semester: Sixth**
Course Title: **Yoga Education**		

Course outcomes:

- Students will be able to understand the Yoga and application of Yoga in different aspects of life.
- Students will learn about the physiological and psychological aspects of Yoga.
- Students will be able to understand the role of Yoga in education and research field.

Unit	Topics	Credits
I	**Introduction:** • Meaning and Definition of Yoga • Aims and Objectives of Yoga • Need and Importance of Yoga in Physical Education and Sports.	4+0
II	**Foundation of Yoga** • Yoga in the Bhagavad Gita • Karma Yoga, Raja Yoga, Jnana Yoga and Bhakti Yoga • Yoga in Early Upanishads. • The Yoga Sutra: General Consideration	
III	**Ashtanga Yoga:** • Patanjali Ji and Origin of Ashtanga Yoga • Eight steps of Ashtanga Yoga	
IV	**Effects of Yoga Practice:** • Physiological effects on different systems of body • Psychological effects on mind. • Sociological effects of family and society.	
V	**Yoga for All:** • International Yoga Day • Common Yoga Protocol suggested by Ministry of AYUSH • Yoga Education Centres in India & Abroad	

VI	**Relationships of Yoga** • Yoga and Mental Health • Yoga and Value Education • Yoga and Sports	
VII	**Advance Concepts of Yoga** • Mechanism of Breathing (Poorak – Kumbhak - Rechak) • Bandhs and Mudras • Shat Karma (Shudhi Kriyas)	
VIII	**Yoga in Education** • Certificate, Diploma and Degree Programs in Yoga • Research in Yoga • Yoga education centers in India and abroad	

Recommended Readings:

1. Gharote, M. L. & Ganguly, H. (1988) *Teaching methods for yogic practices*. Lonawala: Kaivalyadham.
2. Rajjan, S. M. (1985). *Yoga strengthening of relaxation for sports man.* New Delhi: Allied Publishers.
3. Shankar, G. (1998). *Holistic approach of yoga.* New Delhi: Aditya Publishers.Shekar, K. C. (2003). *Yoga for health*. Delhi: Khel Sahitya Kendra.
4. Brown, F. Y. (2000). *How to use yoga*. Delhi: Sports Publication.

SEMESTER VI - PAPER III

Course Code:	**Year: Third**	**Semester: Sixth**
Course Title: **Educational Tour / Yoga Training Camp / Project Work**		

Course Outcomes:

1. Students will be able to understand the practical application of physical activities through educational tour or training camps.
2. Students will learn to manage & handle the live situations during tour/ camp/project.
3. Student will learn to express their experiences in writing through tour report / project report.
4.

Unit	**Topics**	**Credits**
I	The students have to participate in any one of the following: Educational Tour / Yoga Training Camp / Project Work during this semester and prepare a detailed report under the supervision of respective teacher and present it for evaluation before the start of examination of VI semester.	0+2

Group A: For U.G. Honors

SEMESTER VII - PAPER I

Course Code:	**Year: Fourth**	**Semester: Seventh**
Course Title: Research and Statistics in Physical Education & Sports Sciences		

Course outcomes:

- To understand the need, scope and types of Research methods in physical education.
- Students will be able to understand the Research methods in Physical Education and Sports.
- Students will be able to understand and learn basic statistical procedures and its presentation.

Unit	**Topics**	**Credits**
I	**Introduction to Research** • Definition of Research, Classification of Research. • Scope and Importance of Research in Physical Education & Sports. • Research Problem, Location and criteria of selection of problem, Formulation of a research problem, Hypothesis, Limitations and Delimitations.	**4 + 0**
II	**Survey of Related Literature** • Need for surveying related literature. • Literature sources, Library reading. • Research proposal, Meaning and significance of research proposal. • Preparation of research proposal / project.	
III	**Basics of Statistical Analysis** • Statistics: Meaning, Definition, Nature and Importance. • Class Intervals: Raw Score, Continuous and Discrete Series, Class Distribution, Construction of Tables, Sampling. • Graphical Presentation of Class Distribution: Histogram, Frequency Polygon, Frequency Curve. Cumulative Frequency Polygon, Ogive, Pie Diagram	
IV	**Statistical Models in Physical Education and Sports** • Measures of Central Tendency: Mean, Median and Mode - Meaning, Definition, Importance, Advantages, Disadvantages and Calculation from Group and Ungrouped data. • Measures of Variability: Meaning, importance, computing from group and ungroup data • Percentiles and Quartiles: Meaning, importance, computing from group and ungroup data	

Recommended Readings:

1. Best, J.W. (1963). Research in education. U.S.A.: Prentice Hall.
2. Bompa, T. O. &Haff, G. G. (2009). Periodization: theory and methodology of training, 5th ed. Champaign, IL: Human Kinetics.
3. Brown, L. E., &Ferrigno, V. A. (2005). Training for speed, agility and quickness, 2nd ed. Champaign, IL: Human Kinetics.
4. Brown, L.E. & Miller, J., (2005). How the training work. In: Training Speed, Agility, and Quickness. Champaign, IL: Human Kinetics.
5. Carl, E. K., & Daniel, D. A. (1969). Modern principles of athletes training. St. Louis: St. Louis's Mosby Company.
6. Clark, H. H., & Clark, D. H. (1975). Research process in physical education. Englewood cliffs, New Jersey: Prentice Hall, Inc.
7. Garrett, H.E. (1981). Statistics in psychology and education. New York: VakilsFeffer and Simon Ltd.
8. Oyster, C. K., Hanten, W. P., & Llorens, L. A. (1987). Introduction to research: A guide for the health science professional. Landon: J.B. Lippincott Company.
9. Thomas, J.R., & Nelson J.K. (2005). Research method in physical activity. U.S.A: Champaign, IL: Human Kinetics Books.
10. Thomas, J.R., Nelson, J.K. & Silverman, S.J. (2011). Research method in physical activity. U.S.A: Champaign, IL: Human Kinetics Books.
11. Uppal, A. K. (1990). Physical fitness: how to develop. New Delhi: Friends Publication. Verma, J. P. (2000). A text book on sports statistics. Gwalior: Venus Publications.
12. Garrett, H.E. (1981), Statistics in psychology and education. New York: Vakils Feffer and Simon Ltd.
13. Koul, L. (2002), Methodology of Educational Research, Vikas Publishing House, New Delhi.
14. Verma, J. P. (2000), A textbook on sports statistics. Gwalior: Venus Publication

SEMESTER VII - PAPER II

Course Code:	Year: Fourth	Semester: Seventh

Course Title: Computer Applications in Physical Education

Course outcomes:

- To understand the need, scope and application of Computers in physical education.
- Students will be able to learn and understand the use of software for typing, preparing and presentation of text and pictures through computers.
- Students will learn the use of computers to prepare research reports, assignments etc.

Unit	Topics	Credits
I	**Introduction to Computer** • Meaning, need and importance of information and communication technology (ICT). • Application of Computers in Physical Education • Components of computer, input and output device • Application software used in Physical Education and sports	4+0
II	**MS Word** • Introduction to MS Word • Creating, saving and opening a document • Formatting Editing features Drawing table, page setup, paragraph alignment, spelling and grammar check printing option, inserting page number, graph, footnote and notes	
III	**MS Excel** • Introduction to MS Excel • Creating, saving and opening spreadsheet • Creating formulas • Format and editing features adjusting columns width and row height • Understanding charts and Graphs.	
IV	**MS Power Point** • Introduction to MS Power Point • Creating, saving and opening a ppt. file • Format and editing features slide show, design, inserting slide number, picture ,graph ,table • Preparation of Power point presentations	

Recommended Readings:

1. Irtegov, D. (2004). Operating system fundamentals. Firewall Media.
2. Marilyn, M.& Roberta, B.(n.d.), Computers in your future. 2nd edition, India: Prentice Hall.
3. Milke, M. (2007). Absolute beginner's guide to computer basics. Pearson Education Asia.
4. Sinha, P. K. & Sinha, P. (n.d.), Computer fundamentals. 4th edition, BPB Publication.

SEMESTER VII - PAPER III

Course Code:	Year: Fourth	Semester: Seventh
Course Title: Sports Psychology and Sociology		

Course outcomes:

- To understand the need, importance and application of psychology in sports and movements.
- To learn and understand the basic concepts of psychology.
- To understand the need, importance and application of sociology in sports and movements.
- To learn and understand the basic concepts of sociology.
- To understand the relationship between sociology, psychology and physical culture of any society or community.

Unit	Topics	Credits
I	**Introduction** • Meaning, Importance and Scope of Educational and Sports Psychology • General characteristics of various Stages of Growth and Development • Individual Differences: its nature and types, Factors responsible for it. • Heredity and Environment • Psycho – Social aspects of Human Behavior in relation to physical education and sports.	4+0
II	**Psychological Aspects** • Learning: Its nature, theories of learning, law of learning, Plateau in learning, Transfer oflearning, factors affecting learning. • Personality: Meaning, Definition and Characteristics, Dimension of Personality, Personality and Sports Performance. • Motivation: Factors influencing motivation, Motivational Techniques and impact of motivation on sports performance. • Meaning of the terms: Attention, focus, self-talk, relaxation, imagery, Emotion, Arousal, Anxiety, Stress, Aggression and their effects on sports performance	
III	**Social Aspects of Physical Education and Sports** • Orthodoxy, customs, traditions and physical education • Socialization through Physical Education • Role of physical education and sports in National Integration	
IV	**Culture and Physical Education** • Features and Importance of culture • Effect of culture on people life style • Role of culture in Physical Education and Sports Participation • Methods of psycho-social studies: Observation, inspection, questionnaire, interview methods etc.	

Recommended Readings:

1. Bucher, C. A. (1972). Foundation of physical education. St. Louis: The C.V. Mosby Co.
2. Nixon, E. E. & Cozen, F. W. (1969). An introduction to physical education. Philadelphia: W. B. Saunders Co.
3. William, J. F. (1964). Principles of physical education. Philadelphia: W. B. Saunders Co.
4. Ball, D. W. & Loy, J. W. (1975). Sports and social order; Contribution to thesociology of sports. London: Addison Wesley Publishing Co., Inc.
5. Blair, J. & Simpson, R. (1962). Educational Psychology, New York: McMillan Co.
6. Cratty, B. J. (1968). Psychology and physical activity. Eaglewood Cloffs. Prentice Hall.
7. Kamlesh, M.L. (1998). Psychology in physical education and sports. New Delhi: Metropolitan Book Co.
8. Loy, J. W., Kenyon, G. S. & McPherson, B. D. (1978). Sports and social system. London: Addison Wesley Publishing Company Inc.
9. Loy, J. W., Kenyon, G. S. & McPherson, B. D. (1978). Sports culture and society. Philadelphia: Lea & Febiger.
10. Mathur, S. S., (1962). Educational Psychology. Agra. Vinod Pustak Mandir.
11. Skinnner, C. E., (1984). Education Psychology. New Delhi: Prentics Hall of India.
12. William, F. O. & Meyer, F. N. (1979). A handbook of sociology. New Delhi: Eurasia Publishing House Pvt. Ltd.

SEMESTER VII - PAPER IV

Course Code:	Year: Fourth	Semester: Seventh
Course Title: Contemporary Issues in Physical Education, Fitness and Wellness		

Course outcomes:

- To understand the relationship between fitness, wellness and lifestyle
- Students will be able to learn safety and precautionary aspects of exercise and fitness programs
- Students will learn and understand the principles associated with different fitness regimes
- Students will also learn the methods and use of first aid and emergency care

Unit	Topics	Credits
I	**Concept of Physical Education and Fitness** • Definition, Aims and Objectives of Physical Education, fitness and Wellness • Importance and Scope of fitness and wellness • Modern concept of Physical fitness and Wellness	4+0
II	**Fitness, Wellness and Lifestyle** • Fitness – Types of Fitness and Components of Fitness • Understanding of Wellness • Modern Lifestyle and Hypo kinetic Diseases – Prevention and Management	
III	**Principles of Exercise Program** • Means of Fitness development – aerobic and anaerobic exercises • Exercises and Heart rate zones for various aerobic exercise intensities • Concept of free weight Vs Machine, Sets and Repetition etc.	
IV	**Safety Education and Fitness Promotion** • Health and Safety in Daily Life • First Aid and Emergency Care • Common Injuries and their Management	

Recommended Readings:

1. Difiore, J. (1998). *Complete guide to postnatal fitness.* London: A & C Black.
2. Giam, C.K & The, K.C. (1994). *Sport medicine exercise and fitness.* Singapore: P.G. Medical Book.
3. Mcglynn, G., (1993). *Dynamics of fitness*. Madison: W.C.B Brown.
4. Sharkey, B. J. (1990). *Physiology of fitness*, Human Kinetics Book.

SEMESTER VII - PAPER V

Course Code:	Year: Fourth	Semester: Seventh
Course Title: Sports Practical		

Course outcomes:
This course is designed to provide an opportunity to students to learn the basic techniques & skills of any one game/sport and not only able to display them but also systematically teach them.

Unit	Topics	Credits
I	**Introduction** • Historical development of the selected game/sport. • National & International bodies controlling game/sport and their affiliated units. • Major National and International competitions in Game/Sport. • Layout and marking of play filed/ground/courts and measurement ofequipment used in Game/Sport.	**4+0**
II	**Techniques/Skills development** • Classification of techniques/skills. • Technique/skill training: Basic and specific exercises. • Identification & Correction of faults. • Recreational and lead-up activities. • Warm-up and cool down for game/sports.	
III	**Officiating:** • Mechanics of officiating. • Qualities of good official. • Duties of official • Rules & their interpretations.	
IV	**Training** • Basic Concept or preparation of training schedules for selected game/sport. • Psychological preparation required during competition in game/sport. • Preparation of short term and long-term training plans in game/sport. • General /specific fitness tests and performance/skill test in game/sport.	

Recommended Readings:
Latest Official Rule Books of International Federations of particular game/sport and coaching manuals will be utilized.

SEMESTER VIII - PAPER I

Course Code:	Year: Fourth	Semester: Eighth

Course Title: Sports Nutrition and Weight Management

Course outcomes:

- To understand the basic concept of diet and nutrition for sportspersons
- To learn and understand the role of nutrients for health, fitness and wellness
- To learn and understand the means, methods and process of weight management.
- To understand the relationship of balanced diet and healthy living.

Unit	Topics	Credits
I	**Introduction to Sports Nutrition** • Meaning and Definition of Sports Nutrition • Basic Nutrition guidelines • Role of nutrition in sports • Factors to consider for developing nutrition plan •	4+0
II	**Nutrients: Ingestion to Energy Metabolism** • Carbohydrates, Protein, Fat – Classification and their functions • Role of carbohydrates, Fat and protein during exercise • Vitamins, Minerals, Water – Meaning, classification and its function • Role of hydration during exercise, water balance. • Nutrition – daily caloric requirementand expenditure. •	
III	**Nutrition and Weight Management** • Meaning and concept of weight management in modern era • Factors affecting weight management and values of weight management • Concept of BMI (Body mass index), Myth of Spot reduction, Dieting versus exercise for weight control, Common Myths about Weight Loss • Obesity – Definition, types of obesity, Health Risks associated with Obesity, Causes and Solutions to overcoming Obesity.	
IV	**Steps of planning of Weight Management** • Daily calorie intake and expenditure. • Determination of desirable body weight • Relation between Balanced diet and Healthy Lifestyle • Weight management program for sporty child, Role of diet and exercise in weight management, Designing diet plan and exercise schedule for weight gain and loss	

Recommended Readings:

1. Bessesen, D. H. (2008). Update on obesity. *J ClinEndocrinolMetab.93*(6), 2027-2034.
2. Butryn, M.L., Phelan, S., &Hill, J. O. (2007). Consistent self-monitoring of weight: a key component of successful weight loss maintenance. *Obesity (Silver Spring)*. *15*(12), 3091- 3096.
3. Chu, S.Y. & Kim, L. J. (2007). Maternal obesity and risk of stillbirth: a meta-analysis. *Am J Obstet Gynecol*, *197*(3), 223-228.
4. De Maria, E. J. (*2007).* Bariatric surgery for morbid obesity. *N Engl J Med,356*(21), 2176-2183.

SEMESTER VIII - PAPER II

Course Code:	Year: Fourth	Semester: Eighth

Course Title: Educational Technology and Methods of Teaching in Physical Education

Course outcomes:

- To learn and understand the teaching techniques and aids used in physical education
- To understand the value and use of audio-visual aids in imparting education in classroom and sports fields.
- To learn the use of lesson planning and use of micro teaching for effective teaching-learning process.

Unit	Topics	Credits
I	**Introduction** • Education and Education Technology- Meaning and Definitions • Types of Education- Formal, Informal and Non- Formal education. • Educative Process • Importance of Devices and Methods of Teaching.	4+0
II	**Teaching Technique** • Teaching Technique – Lecture method, Command method, Demonstration method,Imitation method, project method etc. • Teaching Procedure – Whole method, whole – part – whole method, part – wholemethod. • Presentation Technique – Personal and technical preparation • Command- Meaning, Types and its uses in different situations.	
III	**Teaching Aids** • Teaching Aids – Meaning, Importance and its criteria for selecting teaching aids. • Teaching aids – Audio aids, Visual aids, Audio – visual aids, Verbal, Chalk board, Charts, Model, Slide projector, Motion picture etc. • Team Teaching – Meaning, Principles and advantage of team teaching. • Difference between Teaching Methods and Teaching Aid.	
IV	**Lesson Planning and Teaching Innovations** • Lesson Planning – Meaning, Type and principles of lesson plan. • General and specific lesson plan. • Micro Teaching – Meaning, Types and steps of micro teaching. • Simulation Teaching - Meaning, Types and steps of simulation teaching.	

Recommended Readings:

1. Bhardwaj, A. (2003). New media of educational planning. New Delhi: Sarup of Sons.
2. Bhatia & Bhatia (1959). The principles and methods of teaching. New Delhi: Doaba House.
3. Kochar, S.K. (1982). Methods and techniques of teaching. New Delhi: Sterling Publishers Pvt. Ltd.
4. Sampath, K. Pannirselvam, A. & Santhanam, S. (1981). Introduction to educational technology, New Delhi: Sterling Publishers Pvt. Ltd.
5. Walia, J.S. (1999). Principles and methods of education. Jullandhar: Paul Publishers.

SEMESTER VIII - PAPER III

Course Code:	Year: Fourth	Semester: Eighth
Course Title: Olympic Movement		

Course outcomes:

- To understand the philosophy of Olympic movement.
- To learn about the time lined development of Olympics and physical culture in the world.
- To learn the difference and intricacies of Ancient, Modern and Para Olympic games
- To learn and understand the working, structure and function of different Olympic bodies.

Unit	Topics	Credits
I	**Origin of Olympic Movement** • Philosophy of Olympic Movement • The early history of the Olympic movement • The significant stages in the development of the modern Olympic movement • Educational and cultural values of Olympic movement	4+0
II	**Modern Olympic Games** • Significance of Olympic Ideals, Olympic Rings, Olympic Flag • Olympic Protocol for member countries • Olympic Code of Ethics • Olympism in action • Sports for All	
III	**Different Olympic Games** • Para Olympic Games • Summer Olympics • Winter Olympics • Youth Olympic Games	
IV	**Committees of Olympic Games** • International Olympic Committee - Structure and Functions • National Olympic committees and their role in Olympic movement • Olympic commission and their functions • Olympic medal winners of India	

Recommended Readings:

1. Osborne, M. P. (2004). *Magic tree house fact tracker: ancient greece and the olympics: a nonfiction companion to magic tree house: hour of the Olympics. New York:* Random House Books for Young Readers.
2. Burbank, J. M., Andranovich, G. D. & Heying Boulder, C. H. (2001). Olympic dreams: theimpact of mega-events on local politics: Lynne Rienner

SEMESTER VIII - PAPER IV

Course Code:	Year: Fourth	Semester: Eighth

Course Title: Officiating and Coaching

Course outcomes:

- To understand the basic concepts of officiating the matches and coaching the players.
- To learn about the role and duties of Coach and an Official in playing situations.
- To be familiar with the characteristics and eligibilities for being a productive and fruitful official and coach.
- To understand and learn the ethics involved in the profession of coaching and officiating.

Unit	Topics	Credits
I	**Introduction of Officiating and Coaching** • Concept of officiating and coaching • Importance and principles of officiating • Relation of official and coach with management, players and spectators • Measures of improving the standards of officiating and coaching	4+0
II	**Coach as a Mentor** • Duties of coach in general, pre, during and post-game • Philosophy of coaching • Responsibilities of a coach on and off the field • Psychological aspects of competition and coaching	
III	**Duties of Official** • Duties of official in general, pre, during and post-game • Philosophy of officiating • Mechanics of officiating – position, signals and movements etc. • Ethics of officiating	
IV	**Qualities and Qualifications of Coach and Official** • General Qualities and qualifications of coach and official • General rules of games and sports and their Interpretation • Eligibility rules of intercollegiate and inter-university tournaments, preparation of TA, DA bills • Integrity and values of sports	

Recommended Readings:

3. Bunn, J. W. (1968). The art of officiating sports. Englewood cliffs N. J. Prentice Hall.
4. Bunn, J. W. (1972). Scientific principles of coaching. Englewood cliffs N. J. Prentice Hall.
5. Dyson, G. H. (1963). The Mechanics of Athletics. London: University of London Press Ltd.
6. Lawther, J. D. (1965). Psychology of coaching. New York: Hall.
7. Singer, R. N. (1972). Coaching athletic Psychology. New York: M.C. Graw Hill.

SEMESTER VIII - PAPER V

Course Code:	Year: Fourth	Semester: Eighth
Course Title: Sports Practical		

Course outcomes:
This course is designed to provide an opportunity to students to learn the basic techniques & skills of any one game/sport and not only able to display them but also systematically teach them.

Unit	Topics	Credits
I	**Introduction** • Historical development of the selected game/sport. • National & International bodies controlling game/sport and their affiliated units. • Major National and International competitions in Game/Sport. • Layout and marking of play filed/ground/courts and measurement ofequipment used in Game/Sport.	**4+0**
II	**Techniques/Skills development** • Classification of techniques/skills. • Technique/skill training: Basic and specific exercises. • Identification & Correction of faults. • Recreational and lead-up activities. • Warm-up and cool down for game/sports.	
III	**Officiating:** • Mechanics of officiating. • Qualities of good official. • Duties of official • Rules & their interpretations.	
IV	**Training** • Basic Concept or preparation of training schedules for selected game/sport. • Psychological preparation required during competition in game/sport. • Preparation of short term and long-term training plans in game/sport. • General /specific fitness tests and performance/skill test in game/sport.	

Recommended Readings:
Latest Official Rule Books of International Federations of particular game/sport and coaching manuals will be utilized.

Group B: UG Honors with Research (for students who secured 75% Marks in first six semesters)

SEMESTER VII - PAPER I

Course Code:	**Year: Fourth**	**Semester: Seventh**
Course Title: Research and Statistics in Physical Education & Sports Sciences		

Course outcomes:

- To understand the need, scope and types of Research methods in physical education.
- Students will be able to understand the Research methods in Physical Education and Sports.
- Students will be able to understand and learn basic statistical procedures and its presentation.

Unit	**Topics**	**Credits**
I	**Introduction to Research** • Definition of Research, Classification of Research. • Scope and Importance of Research in Physical Education & Sports. • Research Problem, Location and criteria of selection of problem, Formulation of a research problem, Hypothesis, Limitations and Delimitations.	**4 + 0**
II	**Survey of Related Literature** • Need for surveying related literature. • Literature sources, Library reading. • Research proposal, Meaning and significance of research proposal. • Preparation of research proposal / project.	
III	**Basics of Statistical Analysis** • Statistics: Meaning, Definition, Nature and Importance. • Class Intervals: Raw Score, Continuous and Discrete Series, Class Distribution, Construction of Tables, Sampling. • Graphical Presentation of Class Distribution: Histogram, Frequency Polygon, Frequency Curve. Cumulative Frequency Polygon, Ogive, Pie Diagram	
IV	**Statistical Models in Physical Education and Sports** • Measures of Central Tendency: Mean, Median and Mode - Meaning, Definition, Importance, Advantages, Disadvantages and Calculation from Group and Ungrouped data. • Measures of Variability: Meaning, importance, computing from group and ungroup data • Percentiles and Quartiles: Meaning, importance, computing from group and ungroup data	

Recommended Readings:

1. Best, J.W. (1963). Research in education. U.S.A.: Prentice Hall.
2. Bompa, T. O. &Haff, G. G. (2009). Periodization: theory and methodology of training, 5th ed.Champaign, IL: Human Kinetics.
3. Brown, L. E., &Ferrigno, V. A. (2005). Training for speed, agility and quickness, 2nd ed. Champaign, IL: Human Kinetics.
4. Brown, L.E. & Miller, J., (2005). How the training work. In: Training Speed, Agility, and Quickness. Champaign, IL: Human Kinetics.
5. Carl, E. K., & Daniel, D. A. (1969). Modern principles of athletes training. St. Louis: St. Louis's Mosby Company.
6. Clark, H. H., & Clark, D. H. (1975). Research process in physical education. Englewood cliffs, New Jersey: Prentice Hall, Inc.
7. Garrett, H.E. (1981). Statistics in psychology and education. New York: VakilsFeffer and Simon Ltd.
8. Oyster, C. K., Hanten, W. P., & Llorens, L. A. (1987). Introduction to research: A guide for the health science professional. Landon: J.B. Lippincott Company.
9. Thomas, J.R., & Nelson J.K. (2005). Research method in physical activity. U.S.A: Champaign, IL: Human Kinetics Books.
10. Thomas, J.R., Nelson, J.K. & Silverman, S.J. (2011). Research method in physical activity. U.S.A: Champaign, IL: Human Kinetics Books.
11. Uppal, A. K. (1990). Physical fitness: how to develop. New Delhi: Friends Publication. Verma, J. P. (2000). A text book on sports statistics. Gwalior: Venus Publications.
12. Garrett, H.E. (1981), Statistics in psychology and education. New York: Vakils Feffer and Simon Ltd.
13. Koul, L. (2002), Methodology of Educational Research, Vikas Publishing House, New Delhi.
14. Verma, J. P. (2000), A textbook on sports statistics. Gwalior: Venus Publication

SEMESTER VII - PAPER II

Course Code:	Year: Fourth	Semester: Seventh

Course Title: Computer Applications in Physical Education

Course outcomes:

- To understand the need, scope and application of Computers in physical education.
- Students will be able to learn and understand the use of software for typing, preparing and presentation of text and pictures through computers.
- Students will learn the use of computers to prepare research reports, assignments etc.

Unit	Topics	Credits
I	**Introduction to Computer** • Meaning, need and importance of information and communication technology (ICT). • Application of Computers in Physical Education • Components of computer, input and output device • Application software used in Physical Education and sports	4+0
II	**MS Word** • Introduction to MS Word • Creating, saving and opening a document • Formatting Editing features Drawing table, page setup, paragraph alignment, spelling and grammar check printing option, inserting page number, graph, footnote and notes	
III	**MS Excel** • Introduction to MS Excel • Creating, saving and opening spreadsheet • Creating formulas • Format and editing features adjusting columns width and row height • Understanding charts and Graphs.	
IV	**MS Power Point** • Introduction to MS Power Point • Creating, saving and opening a ppt. file • Format and editing features slide show, design, inserting slide number, picture ,graph ,table • Preparation of Power point presentations	

Recommended Readings:

1. Irtegov, D. (2004). Operating system fundamentals. Firewall Media.
2. Marilyn, M.& Roberta, B.(n.d.), Computers in your future. 2nd edition, India: Prentice Hall.
3. Milke, M. (2007). Absolute beginner's guide to computer basics. Pearson Education Asia.
4. Sinha, P. K. & Sinha, P. (n.d.), Computer fundamentals. 4th edition, BPB Publication.

SEMESTER VII - PAPER III

Course Code:	Year: Fourth	Semester: Seventh
Course Title: Sports Psychology and Sociology		

Course outcomes:

- To understand the need, importance and application of psychology in sports and movements.
- To learn and understand the basic concepts of psychology.
- To understand the need, importance and application of sociology in sports and movements.
- To learn and understand the basic concepts of sociology.
- To understand the relationship between sociology, psychology and physical culture of any society or community.

Unit	Topics	Credits
I	**Introduction** • Meaning, Importance and Scope of Educational and Sports Psychology • General characteristics of various Stages of Growth and Development • Individual Differences: its nature and types, Factors responsible for it. • Heredity and Environment • Psycho – Social aspects of Human Behavior in relation to physical education and sports.	4+0
II	**Psychological Aspects** • Learning: Its nature, theories of learning, law of learning, Plateau in learning, Transfer oflearning, factors affecting learning. • Personality: Meaning, Definition and Characteristics, Dimension of Personality, Personality and Sports Performance. • Motivation: Factors influencing motivation, Motivational Techniques and impact of motivation on sports performance. • Meaning of the terms: Attention, focus, self-talk, relaxation, imagery, Emotion, Arousal, Anxiety, Stress, Aggression and their effects on sports performance	
III	**Social Aspects of Physical Education and Sports** • Orthodoxy, customs, traditions and physical education • Socialization through Physical Education • Role of physical education and sports in National Integration	
IV	**Culture and Physical Education** • Features and Importance of culture • Effect of culture on people life style • Role of culture in Physical Education and Sports Participation • Methods of psycho-social studies: Observation, inspection, questionnaire, interview methods etc.	

Recommended Readings:

1. Bucher, C. A. (1972). Foundation of physical education. St. Louis: The C.V. Mosby Co.
2. Nixon, E. E. & Cozen, F. W. (1969). An introduction to physical education. Philadelphia: W. B. Saunders Co.
3. William, J. F. (1964). Principles of physical education. Philadelphia: W. B. Saunders Co.
4. Ball, D. W. & Loy, J. W. (1975). Sports and social order; Contribution to thesociology of sports. London: Addison Wesley Publishing Co., Inc.
5. Blair, J. & Simpson, R. (1962). Educational Psychology, New York: McMillan Co.
6. Cratty, B. J. (1968). Psychology and physical activity. Eaglewood Cloffs. Prentice Hall.
7. Kamlesh, M.L. (1998). Psychology in physical education and sports. New Delhi: Metropolitan Book Co.
8. Loy, J. W., Kenyon, G. S. & McPherson, B. D. (1978). Sports and social system. London: Addison Wesley Publishing Company Inc.
9. Loy, J. W., Kenyon, G. S. & McPherson, B. D. (1978). Sports culture and society. Philadelphia: Lea & Febiger.
10. Mathur, S. S., (1962). Educational Psychology. Agra. Vinod Pustak Mandir.
11. Skinnner, C. E., (1984). Education Psychology. New Delhi: Prentics Hall of India.
12. William, F. O. & Meyer, F. N. (1979). A handbook of sociology. New Delhi: Eurasia Publishing House Pvt. Ltd.

SEMESTER VII - PAPER IV

Course Code:	Year: Fourth	Semester: Seventh
Course Title: Contemporary Issues in Physical Education, Fitness and Wellness		

Course outcomes:

- To understand the relationship between fitness, wellness and lifestyle
- Students will be able to learn safety and precautionary aspects of exercise and fitness programs
- Students will learn and understand the principles associated with different fitness regimes
- Students will also learn the methods and use of first aid and emergency care

Unit	Topics	Credits
I	**Concept of Physical Education and Fitness** • Definition, Aims and Objectives of Physical Education, fitness and Wellness • Importance and Scope of fitness and wellness • Modern concept of Physical fitness and Wellness	4+0
II	**Fitness, Wellness and Lifestyle** • Fitness – Types of Fitness and Components of Fitness • Understanding of Wellness • Modern Lifestyle and Hypo kinetic Diseases – Prevention and Management	
III	**Principles of Exercise Program** • Means of Fitness development – aerobic and anaerobic exercises • Exercises and Heart rate zones for various aerobic exercise intensities • Concept of free weight Vs Machine, Sets and Repetition etc.	
IV	**Safety Education and Fitness Promotion** • Health and Safety in Daily Life • First Aid and Emergency Care • Common Injuries and their Management	

Recommended Readings:

1. Difiore, J. (1998). *Complete guide to postnatal fitness.* London: A & C Black.
2. Giam, C.K & The, K.C. (1994). *Sport medicine exercise and fitness.* Singapore: P.G. Medical Book.
3. Mcglynn, G., (1993). *Dynamics of fitness*. Madison: W.C.B Brown.
4. Sharkey, B. J. (1990). *Physiology of fitness*, Human Kinetics Book.

SEMESTER VII - PAPER V

Course Code:	Year: Fourth	Semester: Seventh
Course Title: Sports Practical		

Course outcomes:
This course is designed to provide an opportunity to students to learn the basic techniques & skills of any one game/sport and not only able to display them but also systematically teach them.

Unit	Topics	Credits
I	**Introduction** • Historical development of the selected game/sport. • National & International bodies controlling game/sport and their affiliated units. • Major National and International competitions in Game/Sport. • Layout and marking of play filed/ground/courts and measurement ofequipment used in Game/Sport.	**4+0**
II	**Techniques/Skills development** • Classification of techniques/skills. • Technique/skill training: Basic and specific exercises. • Identification & Correction of faults. • Recreational and lead-up activities. • Warm-up and cool down for game/sports.	
III	**Officiating:** • Mechanics of officiating. • Qualities of good official. • Duties of official • Rules & their interpretations.	
IV	**Training** • Basic Concept or preparation of training schedules for selected game/sport. • Psychological preparation required during competition in game/sport. • Preparation of short term and long-term training plans in game/sport. • General /specific fitness tests and performance/skill test in game/sport.	

Recommended Readings:
Latest Official Rule Books of International Federations of particular game/sport and coaching manuals will be utilized.

SEMESTER VIII - PAPER I

Course Code:	Year: Fourth	Semester: Eighth
Course Title: Sports Nutrition and Weight Management		

Course outcomes:

- To understand the basic concept of diet and nutrition for sportspersons
- To learn and understand the role of nutrients for health, fitness and wellness
- To learn and understand the means, methods and process of weight management.
- To understand the relationship of balanced diet and healthy living.

Unit	Topics	Credits
I	**Introduction to Sports Nutrition** • Meaning and Definition of Sports Nutrition • Basic Nutrition guidelines • Role of nutrition in sports • Factors to consider for developing nutrition plan	4+0
II	**Nutrients: Ingestion to Energy Metabolism** • Carbohydrates, Protein, Fat – Classification and their functions • Role of carbohydrates, Fat and protein during exercise • Vitamins, Minerals, Water – Meaning, classification and its function • Role of hydration during exercise, water balance. • Nutrition – daily caloric requirementand expenditure.	
III	**Nutrition and Weight Management** • Meaning and concept of weight management in modern era • Factors affecting weight management and values of weight management • Concept of BMI (Body mass index), Myth of Spot reduction, Dieting versus exercise for weight control, Common Myths about Weight Loss • Obesity – Definition, types of obesity, Health Risks associated with Obesity, Causes and Solutions to overcoming Obesity.	
IV	**Steps of planning of Weight Management** • Daily calorie intake and expenditure. • Determination of desirable body weight • Relation between Balanced diet and Healthy Lifestyle • Weight management program for sporty child, Role of diet and exercise in weight management, Designing diet plan and exercise schedule for weight gain and loss	

Recommended Readings:

1. Bessesen, D. H. (2008). Update on obesity. *J ClinEndocrinolMetab.93*(6), 2027-2034.
2. Butryn, M.L., Phelan, S., &Hill, J. O. (2007). Consistent self-monitoring of weight: a key component of successful weight loss maintenance. *Obesity (Silver Spring)*. *15*(12), 3091- 3096.
3. Chu, S.Y. & Kim, L. J. (2007). Maternal obesity and risk of stillbirth: a meta-analysis. *Am J Obstet Gynecol*, *197*(3), 223-228.
4. De Maria, E. J. (*2007).* Bariatric surgery for morbid obesity. *N Engl J Med,356*(21), 2176-2183.

SEMESTER VIII - PAPER II

Course Code:	Year: Fourth	Semester: Eighth

Course Title: Educational Technology and Methods of Teaching in Physical Education

Course outcomes:

- To learn and understand the teaching techniques and aids used in physical education
- To understand the value and use of audio-visual aids in imparting education in classroom and sports fields.
- To learn the use of lesson planning and use of micro teaching for effective teaching-learning process.

Unit	Topics	Credits
I	**Introduction** • Education and Education Technology- Meaning and Definitions • Types of Education- Formal, Informal and Non- Formal education. • Educative Process • Importance of Devices and Methods of Teaching.	4+0
II	**Teaching Technique** • Teaching Technique – Lecture method, Command method, Demonstration method,Imitation method, project method etc. • Teaching Procedure – Whole method, whole – part – whole method, part – wholemethod. • Presentation Technique – Personal and technical preparation • Command- Meaning, Types and its uses in different situations.	
III	**Teaching Aids** • Teaching Aids – Meaning, Importance and its criteria for selecting teaching aids. • Teaching aids – Audio aids, Visual aids, Audio – visual aids, Verbal, Chalk board, Charts, Model, Slide projector, Motion picture etc. • Team Teaching – Meaning, Principles and advantage of team teaching. • Difference between Teaching Methods and Teaching Aid.	
IV	**Lesson Planning and Teaching Innovations** • Lesson Planning – Meaning, Type and principles of lesson plan. • General and specific lesson plan. • Micro Teaching – Meaning, Types and steps of micro teaching. • Simulation Teaching - Meaning, Types and steps of simulation teaching.	

Recommended Readings:

1. Bhardwaj, A. (2003). *New media of educational planning*. New Delhi: Sarup of Sons.
2. Bhatia & Bhatia (1959). *The principles and methods of teaching.* New Delhi: Doaba House.
3. Kochar, S.K. (1982). *Methods and techniques of teaching.* New Delhi: Sterling Publishers Pvt. Ltd.
4. Sampath, K. Pannirselvam, A. & Santhanam, S. (1981). *Introduction to educational technology,* New Delhi: Sterling Publishers Pvt. Ltd.
5. Walia, J.S. (1999). *Principles and methods of education.* Jullandhar: Paul Publishers.

SEMESTER VIII - PAPER III

Course Code:	Year: Fourth	Semester: Eighth
Course Title: Research Project		

Course outcomes:

- Research skills are very important for analysis of physical education and sports activities. Through this course, in addition to the theoretical input, an opportunity is given to the students to acquire research skills by under taking a research project as a part of the academic activity.

Research Work	Credits
A Student shall select the research topic in consultation with the faculty member assigned as Supervisor for Research Project. Topic of such research project shall be relevant to physical education and sports. The topic of such research project shall be finalized only after the approval from department / college. The tools of data collection should be finalized and data collection shall be completed well in time. The allotment of the students to a faculty for supervision shall be done by the appropriate authority. The Supervisor will guide the student. (methodology/ project process). The type of research project (qualitative, quantitative or combined) should be based on the consensual decision of both - the student and the supervisor. The complete report of the research project shall be presented for evaluation in standard form i.e. typed and binded with prelims, Introduction, Review of related literature, Methodology/Procedure, Analysis of results, discussion of findings, Conclusions and recommendations followed by references material. A total of 12 Credits shall be allocated to the Research Project in this semester. The research project will be evaluated as per the university rules.	**12**

Recommended Readings:

1. Best, J.W. (1963). Research in education. U.S.A.: Prentice Hall.
2. Clark, H. H., & Clark, D. H. (1975). Research process in physical education. Englewood cliffs, New Jersey: Prentice Hall, Inc.
3. Garrett, H.E. (1981). Statistics in psychology and education. New York: Vakils Feffer and Simon Ltd.
4. Oyster, C. K., Hanten, W. P., & Llorens, L. A. (1987). Introduction to research: A guide for the health science professional. Landon: J.B. Lippincott Company.
5. Thomas, J.R., & Nelson J.K. (2005). Research method in physical activity. U.S.A: Champaign, IL: Human Kinetics Books.
6. Thomas, J.R., Nelson, J.K. & Silverman, S.J. (2011). Research method in physical activity. U.S.A: Champaign, IL: Human Kinetics Books.
7. Garrett, H.E. (1981), Statistics in psychology and education. New York: Vakils Feffer and Simon Ltd.
8. Koul, L. (2002), Methodology of Educational Research, Vikas Publishing House, New Delhi.
9. Verma, J. P. (2000), A textbook on sports statistics. Gwalior: Venus Publication