

CURRICULUM FRAMEWORK:

TWO-YEAR B.P.ED. PROGRAMME

(2019-2020)

Revised Curriculum as per the NCTE New Regulations 2014 for two Year B.P.Ed. Programme as adopted in the Workshop Organised by the Deptt. of Physical Education, Jadavpur University held on 15th to 17th June, 2016 in collaboration with the West Bengal Committee of the Institutes of Physical Education (WBCIPE), West Bengal University of Teachers' Training, Education Planning and Administration (WBUTTEPA) and the Department of Higher education Govt. of West Bengal.

GUIDELINES OF REGULATIONS AND MODEL SYLLABUS STRUCTURE FOR B.P.ED.TWO YEARS PROGRAMME (FOUR SEMESTERS) (CBCS)

(If the University or affiliating body is following choice based credit system, (CBCS) as approved and Circulated by the UGC, the credit hours given in the following curriculum framework need to be considered along with the hours of teaching mentioned for each paper/ activity / course)

(If the University or affiliating body is yet to adopt CBCS, only the hours of teaching mentioned for each paper /activity/ course will be considered, the credit in teaching hours maybe ignored)

Preamble: Bachelor of Physical Education (B.P.Ed.) two years (Four Semesters Choice Based Credit System) programme is a professional programme meant for preparing teachers of physical education in classes VI to X and for conducting physical education and sports activities in classes XI and XII.

B.P.Ed. programme shall be designed to integrate the study of childhood, social context of Physical Education, subject knowledge, pedagogical knowledge, and aim of Physical Education and communication skills .The programme comprises of compulsory and optional theory as well as practical courses and compulsory school internship.

B.P.Ed. 1. Eligibility

Intake, Eligibility and Admission Procedure as per the NCTE norms and standards.

B.P.Ed. 2. Duration:

The B.P.Ed. programme shall be of duration of two academic years, that is, four semesters. However, the students shall be permitted to complete the programme requirements within a maximum of three years from the date of admission to the programme.

B.P.Ed. 3. The CBCS System:

All Programmes shall run on Choice Based Credit System (CBCS). It is an instructional package developed to suit the needs of students, to keep pace with the developments in higher education and the quality assurance expected of it in the light of liberalization and globalization in higher education.

B.P.Ed. 4. Course:

The term course usually referred to, as ‘papers’ is a component of a programme. All courses need not carry the same weight. The courses should define learning objectives and learning outcomes. A course may be designed to comprise Lectures/ tutorials/ laboratory work/ field work/ outreach activities/ project work/ vocational training/ viva/ seminars/ term papers/ assignments/ presentations/ self-study etc. or a combination of some of these.

B.P.Ed. 5. Courses of Programme:

The B.P.Ed. Programme consists of a number of courses, the term 'Course' applied to indicate a logical part of subject matter of the programme and is invariably equivalent to the subject matter of a "paper" in the conventional sense. The following are the various categories of courses suggested for the B.P.Ed. Programme.

Theory:

**Core Course,
Elective Course,**

Practicum:

**Teaching,
Practices.**

B.P.Ed. 6. Semesters:

An academic year is divided into two semesters. Each semester will consist of 17-20 weeks of academic work equivalent to 100 actual teaching days. The odd semester may be scheduled from May/June to November/December and even semester from November/December to May/June. The institution shall work for a minimum of 36 working hours in a week (five or six days a week).

B.P.Ed. 7. Working days:

There shall be at least 200 working days per year exclusive of admission and examination processes etc.

B.P.Ed. 8. Credits:

The term 'Credit' refers to a unit by which the programme is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching (lecture or tutorial) or one and half/ two hours of practical work/field work per week. The term 'Credit' refers to the weight given to a course, usually in relation to the instructional hours assigned to it. The total minimum credits, required for completing a B.P.Ed. Programme is 90 credit and for each semester 20 credits.

Provision of Bonus Credits Maximum 06 Credits in each Semester

Sr. No.	Special Credits for Extra Co-curricular Activities	Credit
1	Sports Achievement at State level Competition (Medal Winner)	1
	Sports Achievement National level Competition (Medal Winner)	2
	Sports participation International level Competition	4
2	Inter Uni. Participation (Any one game)	2
3	Inter College Participation (min. two game)	1
4	National Cadet Corps/National Service Scheme	2
5	Blood donation/ Cleanliness drive/ Community services/	2
6	Mountaineering –Basic Camp, Advance Camp/Adventure Activities	2
7	Organization /Officiating –State/National level in any two game	2
8	News Reposting/Article Writing/book writing/progress report writing	1
9	Research Project	4

Students can earn maximum 06 Bonus credits in each semester by his/her participation in the above mentioned activities duly certified by the Head of the institution/ Department. This Bonus credit will be used only to compensate loss of credits in academic activities.

B.P.Ed. 9. Examinations:

- i. There shall be examinations attend of each semester, for first semester in the month of November/December: for second semester in the month of May/June. A candidate who does not pass the examination in any course(s) shall be permitted to appearing such failed course(s) in the subsequent examinations to be held in November/December or May/June.
- ii. A candidate should get enrolled/ registered for the first semester examination. If enrollment/ registration is not possible owing to shortage of attendance beyond condo nation limit/rules prescribed OR belated joining OR on medical grounds, such candidates are not permitted to proceed to the next semester. Such candidates shall redo the semester in the subsequent term of that semester as a regular student; however, a students of first semester shall be admitted in the second semester, if he/she has successfully kept the term in first semester.

B.P.Ed. 10. Condonation:

Student must have 75% of attendance in each course for appearing the examination. Students who have 74% to 65% of attendance shall apply for condo nation in the prescribed form with the prescribed fee. Students who have 64% to 50 % of attendance shall apply for

Condonation in prescribed form with the prescribed fee along with the Medical Certificate. Students who have below 50% of attendance are not eligible to appear for the examination.

B.P.Ed. 11. Pattern of Question Papers:

Question Papers shall have five questions corresponding to four units of each theory course.

B.P.Ed.: Format of Question Paper for 4 Units.

Each question paper shall have five questions. The pattern will be as follows:

Question No.	Description	Marks
1	Answer in detail (Long Question) Or Answer in detail (Long Question) (Form Unit 1)	15
2	Answer in detail (Long Question) Or Answer in detail (Long Question) (Form Unit 2)	15
3	Answer in detail (Long Question) Or Answer in detail (Long Question) (Form Unit 3)	15
4	Write short notes: any two out of our (Form Unit 4)	15
5	M.C.Q. Type Questions (10 out of 12Que.) (3 Questions. From each unit)	10
Total		70

B.P.Ed. 12. Evaluation:

The performance of a student in each course is evaluated in terms of percentage of marks with a provision for conversion to grade point. Evaluation for each course shall be done by a continuous internal assessment (CIA) by the concerned course teacher as well as by end semester examination and will be consolidated at the end of course. The components for continuous internal assessment are;

One Test	15 Marks
Seminar/Quiz	5 Marks
Assignments	5 Marks
Attendance	5 Marks
Total	30 Marks

Attendance shall be taken as a component of continuous assessment, although the students should have minimum 75% attendance in each course. In addition to continuous evaluation component, the end semester examination, which will be written type examination of at least 3 hours duration, would also form an integral component of the evaluation. The ratio of marks to be allotted to continuous internal assessment and to end semester examination is 30: 70. The evaluation of practical work, wherever applicable, will also be based on continuous internal assessment and on an end- semester practical examination.

B.P.Ed. 13. Minimum Passing Standard:

The minimum passing standard for CIA (Continuous Internal Assessment) and External Examinations shall be 40%, i.e. 12 marks out of 30 marks and 28 marks out of 70 marks respectively for the theory courses. The minimum passing for both CIA & external examination shall be 50%, i.e. 15 marks out of 30 and 35 marks out of 70 marks for the practical courses.

B.P.Ed. 14. Grading:

Once the marks of the CIA (Continuous Internal Assessment) and SEA (Semester End Assessment) for each of the courses are available, both (CIA and SEA) will be added. The marks thus obtained for each of the courses will then be graded as per details provided in R.B.P.Ed.12 from the first semester onwards the average performance within any semester from the first semester is indicated by Semester Grade Point Average (SGPA) while continuous performance (including the performance of the previous semester also) starting from the first semester is indicated by Cumulative Grade Point Average (CGPA). The scores were calculated by the following formula:

$$SGPA = \frac{\sum_{i=1}^n C_i G_i}{\sum_{i=1}^n C_i}$$

$$CGPA = \frac{\sum_{i=1}^n SGPA_i}{n}$$

Where C_i is Credit earned for the course in any semester; G_i is Grade point obtained by the student for the course/ and n is number of courses obtained in that semester; $SGPA$ is SGPA of semester /and n is Number of semester. Thus CGPA is average of SGPA of all the semester starting from the first semester to the current semester.

B.P.Ed. 15. Classification of Final Results:

For the purpose of declaring a candidate to have qualified for the Degree of Bachelor of Physical Education in the First class/ Second class /Pass class or First class with Distinction, the

Marks and the corresponding CGPA earned by the candidate in Core Courses will be the criterion. It is further provided that the candidate should have scored the First /Second Class separately in both the grand total and end Semester (External) examinations.

B.P.Ed. 16. Award of the B.P.Ed. Degree:

A candidate shall be eligible for the award of the degree of the B.P.Ed. only if he/she has earned the minimum required credit including Bonus Credits of the programme prescribed above.

B.P.Ed. 17. Letter Grades and Grade Points:

- i. Two methods- relative grading or absolute grading- have been in vogue for awarding grades in a course. The relative grading is based on the distribution (usually normal distribution) of marks obtained by all the students in the course and the grades are Awarded based on a cut-off mark or percentile. Under the absolute grading, the marks are converted to grades based on pre-determined class intervals. To implement the following grading system, the colleges and universities can use any one of the above methods.
- ii. The grades for each course would be decided on the basis of the percentage marks obtained at the end- semester external and internal examinations as per following table:

Percentage	Grade Point	Letter Grade	Description	Classification of final result
85&above	8.5-10.0	O	Outstanding	First class with Distinction
70-84.99	7.0-8.49	A+	Excellent	
60-69.99	6.0-6.99	A	Very Good	First Class
55-59.99	5.5-5.99	B+	Good	Higher Second Class
50-54.99	5.0-5.49	B	Above Average	Second Class
40-49.99	4.0-4.99	C	Average	Pass Class
Below40	0.0	F	Fail/Dropped	Dropped
	0	AB	Absent	

R. B.P.Ed.18. Grade Point Calculation:

Semester Grade Point Average (SGPA) and Credit Grade Point (CGP) and

declaration of class for B.P.Ed. Programme.

The credit grade point average is calculated on the following basis:

$$\text{SGPA} = \frac{\sum_{i=1}^n \text{Grade Point}_i \times \text{Credit}_i}{\sum_{i=1}^n \text{Credit}_i}$$

Example-I

Marks obtained by Student in course CC101=5/100

Percentage of marks=65%

Grade from the conversion table is =A

$$\text{Grade Point} = 6.0 + 5(0.99/9.99)$$

$$= 6.0 + 5 \times 0.1$$

$$= 6.0 + 0.5$$

$$= 6.5$$

The Course Credits = 04

$$\text{Credits Grade Point (CGP)} = 6.5 \times 04 = 26$$

The semester grade point average (SGPA) will be calculated as a weighted average of all the grade point of the semester courses. That is Semester grade point average (SGPA) = (sum of grade points of all eight courses of the semester) / total credit of the semester as per example given below:

SEMESTER-1

Courses No.	Credit	Marks out of 100 (%)	Grade	Grade Point	Credit Grade point
CC-101	4	65	A	6.5	26
CC-102	4	60	A	6	24
CC-103	4	62	A	6.2	24.8
EC-101/EC-102	4	57	B+	5.7	22.8
PC-101	4	55	B+	5.5	22
PC-102	4	72	A+	7.2	28.8
PC-103	4	66	A	6.6	26.4
PC-104	4	72	A+	7.2	28.8
	32				203.6

Examples: Conversion of marks in to grade points

$$\text{CC-10165} = 60 + 5 = 6.0 + 5 \times (0.99/9.99) = 6.0 + 5 \times 0.1 = 6.0 + 0.5 = 6.5$$

$$\text{CC-10260} = 6.0$$

$$\text{CC-10362} = 60 + 2 = 6.0 + 2 \times (0.99/9.99) = 6.0 + 2 \times 0.1 = 6.0 + 0.2 = 6.2$$

$$\text{EC-101/EC-10257} = 55 + 2 = 5.5 + 2 \times (0.49/4.99) = 5.5 + 2 \times 0.1 = 5.5 + 0.2 = 5.7$$

$$\text{PC-10155} = 5.5$$

$$\text{PC-10272} = 70 + 2 = 7.0 + 2 \times (1.49/14.99) = 7.0 + 2 \times 0.1 = 7.0 + 0.2 = 7.2$$

$$\text{PC-10366} = 60 + 6 = 6.0 + 6 \times (0.99/9.99) = 6.0 + 6 \times 0.1 = 6.0 + 0.6 = 6.6$$

$$\text{PC-10472} = 70 + 2 = 7.0 + 2 \times (1.49/14.99) = 7.0 + 2 \times 0.1 = 7.0 + 0.2 = 7.2$$

$$\text{SEMESTER GRADE POINT AVERAGE (SGPA)} = \text{Total Credit Grade Points}$$

$$= 203.6/32 = 6.3625$$

$$\text{SGPA Sem. I} = 6.3625$$

At the end of Semester I

$$\text{Total SGPA} = 6.3625$$

$$\text{Cumulative Grade Point Average (CGPA)} = 6.3625/1 = 6.362$$

$$\text{CGPA} = 6.66875, \text{Grade} = A, \text{Class} = \text{First Class}$$

SEMESTER-2

Courses No.	Credit	Marks out of 100 (%)	Grade	Grade Point	Credit Grade point
CC-201	4	76	A+	7.6	30.4
CC-202	4	64	A	6.4	25.6
CC-203	4	59	B+	5.9	23.6
EC-201/EC-202	4	80	A+	8	32
PC-201	4	49	C	4.9	19.6
PC-202	4	64	A	6.4	25.6
PC-203	4	55	B+	5.5	22
TP-201	4	72	A+	7.2	28.8
	32				207.6

SGPA Sem. II =6.4875

At the end of Semester-2

Total SGPA for two Semesters= 12.85

Cumulative Grade Point Average (CGPA) =12.85/2=6.425

CGPA=6.66875, Grade= A, Class=First Class

SEMESTER-3

Courses No.	Credit	Marks out of 100 (%)	Grade	Grade Point	Credit Grade point
CC-301	4	64	A	6.4	25.6
CC-302	4	64	A	6.4	25.6
CC-303	4	59	B+	5.9	23.6
EC-301/EC-302	4	81	A+	8.1	32.4
PC-301	4	49	C	4.9	19.6
PC-302	4	64	A	6.4	25.6
PC-303	4	68	A	6.8	27.2
TP-301	4	75	A+	7.5	30
	32				209.6

SGPA Sem. III =6.55

At the end of Semester-3

Total SGPA for three Semesters= 19.4

Cumulative Grade Point Average (CGPA)

=19.4/3=6.466667 CGPA=6.66875, Grade= A, Class=First

Class.

SEMESTER-4

Courses No.	Credit	Marks out of 100 (%)	Grade	Grade Point	Credit Grade point
CC-401	4	83	A+	8.3	33.2
CC-402	4	76	A+	7.6	30.4
CC-403	4	59	B+	5.9	23.6
EC-401/EC-402	4	81	A+	8.1	32.4
PC-401	4	49	C	4.9	19.6
PC-402	4	78	A+	7.8	31.2
TP-401	4	81	A+	8.1	32.4
TP-402	4	75	A+	7.5	30
	32				232.8

SGPA Sem. IV=7.275

At the end of Semester-4

Total SGPA for all the four semesters=26.675

Cumulative Grade Point Average (CGPA)

=26.675/4=6.66875 CGPA=6.66875, Grade= A, Class=First Class

Note:

(1) SGPA is calculated only if the candidate passes in all the courses i.e. get minimum Grade in all the courses.

(2) CGPA is calculated only when the candidate passes in all the courses of all the previous and current semesters.

(3) The cumulative grade point average will be calculated as the average of the SGPA of all the semesters continuously, as shown above.

(4) For the award of the class, CGPA shall be calculated on the basis of:

(a) Marks of each Semester End Assessment And

(b) Marks of each Semester Continuous Internal Assessment for each course. The final Class for B.P.Ed. Degree shall be awarded on the basis of last CGPA (grade) from all the one to four semester examinations.

B.P.Ed. 19. Grievance Redressal Committee:

The college/ department shall form a Grievance Redressal Committee for each course in each college/ department with the course teacher/ Principal/ Director and the HOD of the faculty as the members. This Committee shall solve all grievances of the students.

B.P.Ed. 20. Revision of Syllabi:

1. Syllabi of every course should be revised according to the NCTE.
2. Revised Syllabi of each semester should be implemented in a sequential way.
3. In courses, where units/ topics related to governmental provisions, regulations or laws, that change to accommodate the latest developments, changes or corrections are to be made consequentially as recommended by the Academic Council.
4. All formalities for revisions in the syllabi should be completed before the end of the semester for implementation of the revised syllabi in the next academic year.
5. During every revision, up to twenty percent of the syllabi of each course should be changed to ensure the appearance of the students who have studied the old (unrevised) syllabi without any difficulties in the examinations of revised syllabi.
6. In case, the syllabus of any course is carried forward without any revision, it shall also be counted as revised in the revised syllabi.

Semester - I

Part A: Theoretical Course						
Course Code	Title of the Papers	Total Hours	Credit	Internal Marks	External Marks	Total Marks
Core Course						
CC-101	History, Principle and Foundation of Physical Education & Olympic Movement	40	4	30	70	100
CC-102	Anatomy and Physiology	40	4	30	70	100
CC-103	Health Education and Environmental Studies	40	4	30	70	100
Elective Course (Anyone)						
EC-101	Physical Literacy through Movement Education	40	4	30	70	100
EC-102	Officiating and Coaching					
Part-B: Practical Course						
PC-101	Track and Field: All Running Events - 80 Relay Race: 20	60	4	30	70	100
PC-102	Swimming or Gymnastics	60	4	30	70	100
PC-103	March Past – 40 (Compulsory) Mass Demonstration Activities: Bratachari – 20 (Compulsory) and Dumbbells, Wands, Hoop, Umbrella, Tipri, Malkhamb, Lezium, Callisthenics. (Any two): 20 + 20 = 40	60	4	30	70	100
PC-104	Yoga- 60, Weight training- 20 Aerobics- 20	60	4	30	70	100
Total		400	32	240	560	800

Semester - II

Part A: Theoretical Course						
Course Code	Title of the Papers	Total Hours	Credit	Internal Marks	External Marks	Total Marks
Core Course						
CC-201	Yoga Education and Inclusive Education	40	4	30	70	50+50=100
CC-202	Educational Technology and Methods of Teaching in Physical Education	40	4	30	70	100
CC-203	Organization and Administration	40	4	30	70	100
Elective Course (Anyone)						
EC-201	Contemporary Issues in Physical Education, Fitness and Wellness	40	4	30	70	100
EC-202	Sports Nutrition and Weight Management					
Part-B :Practical Course						
PC-201	Track and Field: All Jumping Events	60	4	30	70	100
PC-202	Team Games: Football, Volleyball, Throwball, Netball, Softball. (Any two) (50x2 marks)	60	4	30	70	100
PC-203	Indigenous Sports: Kho-kho and Kabaddi. (50x2 marks)	60	4	30	70	100
Part – C Teaching Practices						
TP-201	Teaching Practices: (20 Lessons Plan in school teaching for Internal Examination) (01 General Lessons Plan & 01 Specific Lessons Plan in school teaching for External Examination). (50+50=100)	60	4	30	70	100
Total		400	32	240	560	800

Semester - III

Part A: Theoretical Course						
Course Code	Title of the Papers	Total Hours	Credit	Internal Marks	External Marks	Total Marks
Core Course						
CC-301	Sports Training	40	4	30	70	100
CC-302	Computer Applications in Physical Education and Sports Science	40	4	30	70	100
CC-303	Sports Psychology and Sociology in Physical Education and Sports	40	4	30	70	100
Elective Course (Anyone)						
EC-301	Sports Medicine, Physiotherapy and Rehabilitation	40	4	30	70	100
EC-302	Curriculum Design and Gender Education					
Part–B: Practical Course						
PC-301	Track and Field: All throwing events.	60	4	30	70	100
PC-302	Combative Sports: Martial Art, Karate, Judo, Fencing, Boxing, Taekwondo, Wrestling, Lathi. (Any two) (50x2 marks)	60	4	30	70	100
PC-303	Team Games: Handball, Cricket, Hockey, Basketball, Baseball. (Any two) (50x2 marks)	60	4	30	70	100
Part – C: Teaching Practices						
TP-301	Sports Specialization: Minimum 20 Internal Coaching Lessons Plan in schools. 02 External Coaching Lessons Plans in separate games in schools.	60	4	30	70	100
Total		400	32	240	560	800

Semester - IV

Part A: Theoretical Course						
Course Code	Title of the Papers	Total Hours	Credit	Internal Marks	External Marks	Total Marks
Core Course						
CC-401	Measurement and Evaluation in Physical Education	40	4	30	70	100
CC-402	Kinesiology and Biomechanics	40	4	30	70	100
CC-403	Research and Statistics in Physical Education	40	4	30	70	100
Elective Course (Anyone)						
EC-401	Theory of sports and game	40	4	30	70	100
EC-402	Sports Management					
Part-B: Practical Course						
PC-401	Racket Sports: Table Tennis, Badminton, Tennis, Squash. (Any one): (1x40 marks). Measurement of AAHPERD Youth Fitness Test – 30 marks & Measurement of Motor Fitness Test: 30 marks.	60	4	30	70	100
PC-402	Layout and Officiating ability: Layout and Officiating ability of Track and Field events. - 40 marks. Layout and Officiating ability of all Court Marking. - 60 marks.	60	4	30	70	100
Part – C: Teaching Practices						
TP-401	Teaching Practice: Internal Teaching Lessons at school for Racket Sports, Team Games, Indigenous Sports – 20 Lessons. External Teaching Examination at school – 02 Lessons. (Racket Sports/ Team Games/ Indigenous Sports).	60	4	30	70	100
TP-402	Games Specialization: Internal Coaching Lessons Plans at school – 20 Lessons. External Coaching Lessons Plans at school – 02 Lessons in separate game.	60	4	30	70	100
		400	32	240	560	800
		1600	128	960	2240	3200

Semester-I

Theory Courses

CC-101: HISTORY, PRINCIPLES AND FOUNDATION OF PHYSICAL EDUCATION & OLYMPIC MOVEMENT (CORE COURSE)

UNIT-1: Introduction to the Concept of Physical Education

- 1.1 Meaning, Definition, Misconceptions and Scope of Physical Education.
- 1.2 Aims and Objective of Physical Education.
- 1.3 Relationship of Physical Education with General Education, Need for Physical Education in Modern society.
- 1.4 Physical Education as an Art and Science.

UNIT-2: History of Development of Physical Education

- 2.1 History of the development of Physical Education during pre-independence period.
- 2.2 Post-Independence Period - Physical Education in India with reference to development of Physical education in West Bengal.
- 2.3 Contribution of Akhras, Vyayamshalas & YMCA.
- 2.4 Contribution of Eminent Physical Educationists: J.B. Basedow, J.F. Gustmuth, F.L.Jahn, Franz Natchtegall, Niles Bukh, P.H.Ling. H.C.Buck, James Buchanan, P.M. Joshep, Rabindranath Tagore, Swami Vivekananda, Rishi Aurobindo.

UNIT-3: Foundation & Principles of Physical Education

3.1 Philosophical foundation:

Idealism, Realism, Pragmatism and Naturalism in Physical Education.

3.2 Biological Principles:

Change of locomotion from Biped to Quadruped position – Advantages and Disadvantages. - Age & Gender Characteristics, Body type, Fitness and wellness movement in the contemporary perspectives.

3.3 Psychological principles:

Psychological factors affecting sports performance, Growth and Development – meaning, difference and principles.

3.4 Sociological principles:

Socialization through Physical Education, social integration and cohesiveness, National & International integration through sports.

UNIT-4: Olympic Movement

- 4.1 The history of ancient Olympic movement.
- 4.2 The significant stages in the development of the modern Olympic movement, Philosophy of Olympic movement
- 4.3 Significance of Olympic Ideals, Olympic Rings, Olympic Flag, Olympic Oath.
- 4.4 International Olympic Committee - Structure and Functions, National Olympic committees and their role in Olympic movement, Types of Olympic Games.

References:

1. **Bucher, C. A. (n.d.)** Foundation of physical education. St. Louis: The C.V. Mosby Co. Deshpande, S. H. (2014). Physical Education in Ancient India. Amravati: Degree college of Physical education.
2. **Mohan, V. M. (1969).** Principles of physical education. Delhi: Metropolitan Book Dep. Nixon, E. E. & Cozen, F.W. (1969). An introduction to physical education. Philadelphia: W.B. Saunders Co.
3. **Obertuffer, (1970).** Delbert physical education. New York: Harper & Brothers Publisher. Sharman, J. R. (1964). Introduction to physical education. New York: A.S. Barnes & Co.
4. **William, J. F. (1964).** The principles of physical education. Philadelphia: W.B. Saunders Co.

CC-102: Anatomy and Physiology

UNIT-1: Introduction of the Human Body

- 1.1 Organization of the human body and Brief introduction of Anatomy Physiology in the field of Physical Education and Sports
- 1.2 Cell-structure and functions of cells
- 1.3 Tissue- Types of tissue and their functions
- 1.4 Skeletal System- Bones of the human body-axial and appendicular skeleton. Classification and functions of bone Anatomical sex difference. Brief description of Joints.

UNIT-2: System I

- 2.1 Muscular system- Types of muscle and functions-Structure of skeletal muscle, Major muscles of shoulder, hip and knee joint
- 2.2 Digestive system: The alimentary canal /G.I. tract, Accessory glands and digestive juices – Brief outline of process of carbohydrate, fat and protein digestion
- 2.3 Energy metabolism : Brief discussion on energy metabolism , Fuel for muscular work
- 2.4 Circulatory System: Function of circulatory system. Composition and function of blood, Heart- location and structure, pulmonary circulation, Systemic circulation. Cardiac cycle, Blood pressure, Blood group, Blood coagulation. Blood and immunity.

UNIT-3: System II

- 3.1 Respiratory system: Organs of respiration, meaning internal and external respiration. mechanism of respiration,
- 3.2 Excretory system: Structure and function of kidney, urine formation
- 3.3 Endocrine system: Location, secretion and functions of different endocrine glands
- 3.4 Nervous system: organization, central nervous system- Brain, spinal cord, autonomic nervous system. Concept of nerve- muscle physiology: Neuromuscular junction and transmission.

UNIT-4: Effect of Exercise on Different System

- 4.1 Exercise-Concept and type
- 4.2 Types of muscular contraction. Effect of exercise on muscular system
- 4.3 Effect of exercise on circulatory system- Heart rate, stroke volume, cardiac output, athletic heart
- 4.4 Effect of exercise on respiratory system- Tidal volume, respiratory rate, pulmonary ventilation, oxygen uptake, oxygen debt or EPOC (Excess Post exercise oxygen consumption.)

References:

1. Gupta, A. P. (2010). Anatomy and physiology. Agra: SumitPrakashan.
2. Gupta, M. and Gupta, M. C. (1980). Body and anatomical science. Delhi: Swarn Printing Press.
3. Guyton, A.C. (1996). Textbook of Medical Physiology, 9th edition. Philadelphia: W.B.
4. Karpovich, P. V. (n.d.). Philosophy of muscular activity. London: W.B. Saunders Co. Lamb, G. S. (1982). Essentials of exercise physiology. Delhi: Surjeet Publication.
5. Moorthy, A.M. (2014). Anatomy physiology and health education.Karaikudi: MadalayamPub.
6. Morehouse, L. E. & Miller, J. (1967). Physiology of exercise. St. Louis: The C.V. Mosby Co. Pearce,
7. E. C. (1962). Anatomy and physiology for nurses. London: Faber & Faber Ltd.
8. Sharma, R. D. (1979). Health and physical education, Gupta Prakashan.
9. Singh, S. (1979). Anatomy of physiology and health education. Ropar: Jeet Publications.

CC-103: Health Education and Environmental Studies

UNIT-1: Health Education

- 1.1 Concept, Dimensions, Spectrum and Determinants of Health.
- 1.2 Definition of Health, Health Education, Aims, objectives and principles of Health Education
- 1.3 Personal Hygiene: Care of eye, ear, skin and hair.
- 1.4 School Health Program: Health service, Health instruction, Health supervision, health appraisal and Health record.

UNIT-2: Health Problems in India- Prevention and Control

- 2.1 Communicable diseases: Malaria, Dengue, Dysentery, Cough and cold, chicken pox.
- 2.2 Non-Communicable diseases: Obesity, Diabetes, Hyper Tension, Cancer.
- 2.3 Nutritional Disorder: Mother-child Health Care, Explosive Population, Food Adulteration, First-Aid and emergency care.
- 2.4 Postural Deformities

UNIT- 3: Environmental Studies

- 3.1 Historical Background and concept of Environmental Studies
- 3.2 Definition, scope, need and importance of Environmental Studies
- 3.3 Recycling of wastes, plastic recycling and probation of plastic bag/cover
- 3.4 Role of School in Environmental conservation and sustainable development.

UNIT- 4: Natural Resources and Related Environmental Issues

- 4.1 Water resources, food resources and Land resources.
- 4.2 Definition, effects and control measures of air pollution, water pollution, soil pollution, Noise pollution and thermal pollution.
- 4.3 Management of environment and Govt. Policies- role of Pollution Control Board
- 4.4 Celebration of various days in relation with environment.

References:

1. Agrawal, K.C. (2001). Environmental biology. Bikaner: Nidhi publishers Ltd.
2. Frank, H. & Walter, H., (1976). Turners school health education. Saint Louis: The C.V. Mosby Company.
3. Nemir, A. (n.d.). The school health education. New York: Harber and Brothers. Odum, E.P. (1971). Fundamental of ecology. U.S.A.: W.B. Saunders Co.

EC-101: Physical Literacy through Movement Education (Elective)

UNIT-1: Introduction to Movement Education and Physical Literacy

- 1.1 Definition, Meaning & Importance of Movement Education.
- 1.2 Definition, Meaning & Importance of Physical Literacy.
- 1.3 Concept of developmentally Appropriate Physical Activities.
- 1.4 Standards based Physical Education Curriculum (NASPE Standards).

UNIT-2: Motor Skill & Movement Pattern

- 2.1 Classification of Motor Skills: Fundamental (Locomotor, Nonlocomotor, Body Management Skill), Specialized (Manipulative, Rhythmic Movement, Game & Sport Skills).
- 2.2 Skill Themes Approach and Development of Skill Themes: Traveling, Chasing, fleeing, dodging, jumping, landing, transferring body weight, striking, kicking, throwing and catching.
- 2.3 Introduction to Movement Concepts, Development of Movement Concepts: Space Awareness, Effort Concepts, Relationships.
- 2.4 Long Term Athlete Development (LTAD)

UNIT- 3: Participation in Physical Activity and Personal &Social Development

- 3.1 Personal Development: Self-concept, Cognitive Functioning and Motivational outcomes
- 3.2 Social Development: Altruism, Controlling Aggression, Cooperation, Group development.
- 3.3 United Nations and other organizations using Sport and Traditional Sports for Social Development
- 3.4 Sport for Development: Sport for Education, Economic, Gender, Health and Peace.

UNIT- 4: Pedagogical Models for Physical Literacy &Movement Education

- 4.1 Need for child centered teaching models.
- 4.2 Teaching Games for Understanding (TGfU) model: Invasion Games, Net/Wall Games, Striking/ Fielding Games, Target Games
- 4.3 Education through Movement (ETM) program
- 4.4 Coaching life skills through sport

References:

1. **Abels, K. & Bridges, J. M. (2010)** Teaching Movement Education: Foundations for active lifestyles. Human Kinetics
2. **Graham, G., Holt, Shirley & Parker, Melissa (1993)** Children Moving. A Reflective Approach to Teaching Physical Education with Movement Analysis, Wheel 3rd Edition, Mayfield Publishing Company.
3. **Lund, J &Tannehill& Lund, Jacalyn (2010)** Standards-Based Physical Education Curriculum Development, 2nd Edition. Jones &Barlett Learning.
4. **Frank, A. M (2003)** Sports and Education: A Reference Handbook (Contemporary Education Issues), ABC-CLIO.
5. **Cicomascuolo, L. E. & Sullivan, E. C. (2013)** The Dimensions of Physical Education. Jones &Barlett Learning.
6. **Pangrazi, R. P. (1998)** Dynamic Physical Education for Elementary School Children, 12th Edition. Allyn& Bacon.
7. **Griffin, L. & Butler, J. (2005)** Teaching Games for Understanding: Theory, Research, and Practice. Human Kinetics
8. **Coalter, F. (2013)** Sport for Development: What game are we playing?.Routledge.

EC 102: Officiating and Coaching (Elective)

UNIT – 1: Introduction of Officiating and Coaching

- 1.1 Concept of Officiating and Coaching
- 1.2 Importance and principles of Officiating
- 1.3 Relation of official and coach with management, players and spectators
- 1.4 Measures of improving the standards of Officiating and Coaching

UNIT – 2: Coach as a Mentor

- 2.1 Duties of coach in general, pre, during and post-game.
- 2.2 Philosophy of coaching.
- 2.3 Responsibilities of a coach on and off the field
- 2.4 Psychology of competition and coaching

UNIT – 3: Duties of Official

- 3.1 Duties of official in general, pre, during and post-game.
- 3.2 Philosophy of Officiating
- 3.3 Mechanics of officiating – Position, singles and movement etc.
- 3.4 Ethics of officiating

UNIT – 4: Qualities and Qualification of Coach and Official

- 4.1 Qualities and Qualification of coach and official
- 4.2 General rules of game and sports
- 4.3 Eligibility rules of inter-collegiate and inter-university tournaments, preparation of TA,DA bills
- 4.4 Integrity and values of sports

Reference Books:

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

Semester–II

Theory Courses

CC-201: YOGA EDUCATION AND INCLUSIVE EDUCATION

UNIT -1: Introduction of Yoga

- 1.1 Meaning and Definition of Yoga
- 1.2 Aim and Objectives of Yoga
- 1.3 History and Philosophical aspects of Yoga
- 1.4 Need and Importance of Yoga in Physical Education and Sports

UNIT -2: Methods of Yoga

- 2.1 Karma Yoga, Jnana Yoga, Bhakti Yoga and Raja Yoga
- 2.2 Steps of Hatha Yoga, Astanga Yoga and Yogic Teaching Method
- 2.3 Effect of asana and pranayama on human body and mind
- 2.4 Yoga as therapy

UNIT -3: Introduction to Inclusive Education

- 3.1 Concept and history of special education, integrated education and inclusive education and their relationship
- 3.2 Philosophical, Sociological, Economical and Humanitarian dimensions of inclusive education.
- 3.3 Advantages of inclusive education for the individual and society
- 3.4 Factors affecting inclusion

UNIT -4: Inclusion in Operation & Teacher preparation for inclusive school

- 4.1 Class room management and organizations, curricular adaptations, learning designing and development of suitable Teaching Learning Method
- 4.2 Pedagogical strategies to respond to individual needs of students: Cooperative learning strategies in the class room, peer tutoring, social learning, buddy system, reflective teaching, multisensory teaching etc.
- 4.3 Problems in inclusion in the real class room situations; ways for overcoming the problems.
- 4.4 Teacher preparation for inclusive education. Skills and competencies of teachers

Reference Books:

1. Brown, F.Y. (2000). Howtouseyoga. Delhi: Sports Publication.
2. Gharote, M.L. & Ganguly, H, (1988). Teaching methods for yogic practices. Lonawala: Kaixydamoe.
3. Rajjan, S.M. (1985). Yogastrengtheningof relaxationforsportsman. New Delhi: Allied Publications.
4. Shankar, G. (1998). Holistic approach of yoga. New Delhi: Aditya Publishers. Shekar, K.C. (2003). Yoga for health. Delhi: Khel Sahitya Kendra.
5. Nanda, B.P. (2014) Sikhya Ekibhaban, Classiq Books, Kolkata.
6. Nanda, B.P. (2012) Challenged Children: Problems and Management. Ankush Prakashan, Kolkata.
7. Nanda, B.P. (2008) School without walls in 21st Century: From exclusion to inclusion practices in education. Mittal Publications, New Delhi.
8. Nanda, B.P. and Ghosh, S. (2010) Bishes Sikshar Itihas, Rabindra Bharati Prakashana, Kolkata.
9. Nanda, B.P. and Zaman, S.S. (2002) Batichrom dharmi Sishu. Mawola Brothers, Dhaka, Bangladesh

CC – 202: Educational technology and methods of teaching in physical education

UNIT – 1: Introduction

- 1.1 Education and education technology- meaning and definitions
- 1.2 Types of education – Formal, Informal and non-formal education
- 1.3 Educative Processes
- 1.4 Importance of device and methods of teaching and class management

UNIT – 2: Teaching Technique

- 2.1 Teaching Techniques – Lecture Method, Command Method, Demonstration Method, Imitation Method, Project Method etc. ; Teaching procedure – Whole method, Whole – part- whole method, Part- whole method
- 2.2 Presentation technique – personal and technical preparation and presentation
- 2.3 Verbal Non-verbal communication technique
- 2.4 Details of three fundamental methods – meaning, types and its uses in different situation

UNIT – 3: Teaching Aids and Competition

- 3.1 Teaching Aids – meaning importance and its criteria for selecting teaching aids. Community Aids, Co-curricular Aids
- 3.2 Type of Teaching Aids – Audio aids, Visual Aids, Audio-visual Aids
- 3.3 Meaning, Principles and advantages of team teaching
- 3.4 Group Competition, Intramural and extramural Competition

UNIT – 4: Learning Designing and Teaching Innovations

- 4.1 Meaning, Types and Principle of Learning designing
- 4.2 General and Specific Learning designing. Simulation Teaching – meaning, types and steps of Simulation Teaching
- 4.3 Meaning, Types and Steps of Micro and Macro Teaching.
- 4.4 Classification of students

References:

1. Bhardwaj, A. (2003). New media of Educational Planning. New Delhi: Sarup of sons.
2. Bhatia & Bhatia, (1959). The Principle and Methods of Teaching. New Delhi: Doaba House.
3. Kochar, S.K. (1982). Methods and Technique 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. Wlia, J.S. (1999). Principles and Methods of Education. Jullandhar: Paul Publishers.

CC – 203: Organization and Administration

UNIT - 1: Introduction to Organization and Administration

- 1.1 Meaning Definition, and Importance of organization and Administration in Physical Education
- 1.2 Meaning, Definition and Importance of Planning
- 1.3 Basic principles of Planning
- 1.4 Functions of organization and Administration

UNIT – 2: Office and Time-Table Management

- 2.1 Meaning Definition, and Functions of Office Management
- 2.2 Kinds of office Management
- 2.3 Maintenance of different types of Register
- 2.4 Time-Table Management: Meaning, need and Importance

UNIT – 3: Management of Sports Facility

- 3.1 Types of facilities: Infrastructure -Indoor, Outdoor
- 3.2 Facility Management: Equipment Store Room, Gymnasium, Swimming pool, Play ground
- 3.3 Equipment: Need, Importance, Procedure of purchase, Care and Maintenance
- 3.4 Physical efficiency Record, Medical examination Record

UNIT – 4: Tournament

- 4.1 Importance of Tournament
- 4.2 Types of Tournament and its organizational structure
- 4.3 Organizational structure of athletic meet
- 4.4 Sports Event, Intramural and Extramural Tournament Planning

References:

1. Broyles, F. J. & Rober, H. D. (1979). Administration of sports, Athletic programme: A Managerial Approach. New York: Prentice hall Inc.
2. Bucher, C. A. (1983). Administration of Physical Education and Athletic programme. St.Louis: The C.V. Mosby Co.
3. Kozman, H.C. Cassidy, R. & Jackson, C. (1960). Methods in Physical Education. London: W.B. Saunders Co.
4. Pandey, L.K. (1977). Methods in Physical Education. Delhi: Metropolitan Book Depot.

EC 201: CONTEMPORARY ISSUES IN PHYSICAL EDUCATION, FITNESS AND WELLNESS (Elective)

UNIT – 1: Concept of Fitness

- 1.1 Meaning and Definition of Fitness
- 1.2 Type of fitness
- 1.3 Definition and component of physical fitness
- 1.4 Changing concept of physical fitness

UNIT – 2: Concept of Wellness and Lifestyle

- 2.1 Concept and dimensions of wellness
- 2.2 Cyber culture and modern life style
- 2.3 Diseases due to lifestyle – Their prevention and management through physical activities
- 2.4 Construction of Wellness profile

UNIT – 3: Principle of Exercise Programme

- 3.1 Means of fitness development – aerobic and anaerobic exercises
- 3.2 Principle of obesity control and weight management
- 3.3 Concept of sets, repetition, volume, intensity, density of exercise
- 3.4 Concept of designing different fitness training programme for different age group

UNIT – 4: Safety Education and Fitness Promotion

- 4.1 Definition and need of Safety Education
- 4.2 Determination of desirable body weight
- 4.3 Health drinks and sports drinks- their need and importance
- 4.4 Common injuries and their management

References:

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. Sharkey, B. J.(1990). Physiology of fitness, Human Kinetics Book.

EC- 202: Sports Nutrition and Weight Management (Elective)

UNIT-1: Introduction to Nutrition

- 1.1 Meaning and definition of Nutrition and sports nutrition
- 1.2 Guidelines of basic nutrition
- 1.3 Role of nutrition in sports
- 1.4 Factors for developing a nutritional plan

UNIT- 2: Nutrients

- 2.1 Macro Nutrients- Carbohydrate, protein, fat - Meaning, Sources and functions
- 2.2 Micro Nutrients- Vitamins, minerals, water – meaning, Sources, classification and functions
- 2.3 Role of carbohydrate, fat and protein during exercise
- 2.4 Role of hydration during exercise and water balance.

UNIT-3: Nutrition and Weight Management

- 3.1 Meaning and concept of weight management in modern era. Factors affecting weight management and values of weight management
- 3.2 Concept of B.M.I.(Body Mass Index) and Obesity
- 3.3 Obesity and its hazards, Myth of Spot reduction, dieting versus exercise for weight control, Common Myths about weight loss
- 3.4 Health risks associated with Obesity – Causes and solution for overcoming obesity.

UNIT-4: Steps of Planning of Weight Management

- 4.1 Nutrition – Daily calorie intake and expenditure.
- 4.2 Balance diet and athletic diet
- 4.3 Role of diet and exercise in weight management
- 4.4 Weight management programme for sporty child, Design diet and exercise schedule for weight gain and loss.

References:

1. Bessesen, D. H. (2008). Update on obesity. *J Clin Endocrinol Metab.* 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 metaanalysis. *Am J Obstet Gynecol*, 197(3), 223-228.
4. DeMaria, E. J. (2007). Bariatric surgery for morbid obesity. *N Engl J Med*, 356(21), 2176-2183.
5. Dixon, J.B., O'Brien, P.E., Playfair, J. (n.d.). Adjustable gastric banding and conventional therapy for type 2 diabetes: a randomized controlled trial. *JAMA*. 299(3), 316-323.

Semester – III

Theory Courses

CC – 301: Sports Training

UNIT – 1: Introduction to Sports Training

- 1.1 Meaning and Definition of Sports Training and Sports Coaching
- 1.2 Aim and Objectives of Sports Training
- 1.3 Principles of Sports Training and qualification and duties of sports trainer
- 1.4 Components of games and sports training (Motor fitness components Technique, Tactics and Strategical approach, Psychological components facilities and infrastructure)

UNIT – 1: Process of development of motor fitness component

- 2.1 Strength- Means and method of Strength development
- 2.2 Speed - Means and method of Speed development
- 2.3 Endurance- Means and method of Endurance development
- 2.4 Power and Balance - Means and method of Power and Balance development

UNIT – 1: Training load, load dynamics and Training processes

- 3.1 Concept definition and types of training load
- 3.2 Components of training load
- 3.3 Concept of load dynamics and its principles
- 3.4 Technical and Tactical training- Meaning, Importance and methods.

UNIT – 1: Programme, planning and system of sports training

- 4.1 Periodization- Meaning, definition and types. Aims, Objectives and Content of different periods- Preparatory, Competition and Transition.
- 4.2 Planning- Training session for Micro, Meso and Macro cycles.
- 4.3 Systems of Sports Training- Basic Performance, Good Performance and High Performance.
- 4.4 Talent identification. Meaning of Flexibility and coordinative ability and their role in High Performance

Reference:

1. Dick, W. F. (1980). Sports training principles. London: Lepus Books.
2. Harre, D. (1982). Principles of sports training. Berlin: Sporulated.
3. Jensen, R. C. & Fisher, A.G. (1979). Scientific basis of athletic conditioning. Philadelphia: Lea and Fibiger, 2nd Edn.
4. Matvyew, L.P. (1981). Fundamental of sports training. Moscow: Progress Publishers.
5. Singh, H. (1984). Sports training, general theory and methods. Patials: NSNIS.
6. Uppal, A.K., (1999). Sports Training. New Delhi: Friends Publication.

CC-302: Computer Applications in Physical Education and Sports Science

UNIT – 1: Introduction to Computer Application

- 1.1 Components of computer-input and output unit, storage unit, CPU, ALU, control unit.
- 1.2 Starting & quitting windows, setting display, time & date, managing files and folders.
- 1.3 Meaning, need and importance of information and communication technology (ICT).
- 1.4 Application of computer and computer software in Physical Education and Sports

UNIT – 2: Word

- 2.1 Introduction to word
- 2.2 Creating, saving and opening a document
- 2.3 Formatting & editing features, drawing table and graphs, page setup, paragraph alignment, spelling and grammar check, bullets and numbering, page number, header and footer, footnote and endnotes, mail merge, printing option and hyperlink.
- 2.4 Preparation of word document

UNIT – 3: Excel

- 3.1 Introduction to Excel
- 3.2 Creating, saving and opening spreadsheet
- 3.3 Format and editing features, adjusting columns width and row height, Creating formulas, sort and filter, inserting graph and pictures, printing option
- 3.4 Preparation of Excel worksheet

UNIT – 4: Power Point

- 4.1 Introduction to Power Point
- 4.2 Creating, saving and opening a ppt file
- 4.3 Format and editing features, slide show, design, inserting slide number, picture, graph, table, hyperlink and graphics.
- 4.4 Preparation of Power Point Presentation

References:

- 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.

CC – 303: Sports Psychology and Sociology in Physical Education and Sports

UNIT – 1: Introduction to Psychology and Sociology

- 1.1 Meaning, Importance and scope of Sports Psychology and Sociology.
- 1.2 Biological Basis of Human Behaviour
- 1.3 Individual Differences – Heredity and Environment
- 1.4 Psycho-social aspects of Human behavior in relation to Physical Education and Sports

UNIT – 2: Learning, Maturity and Growth & Development

- 2.1 Learning-Definition, Types and Laws of Learning. Theories of Learning. Factors affecting Learning, Transfer of Learning. Learning Curve – Stagnation in learning.
- 2.2 Growth and Development – Stages of Development, need of Physical Activity
- 2.3 Personality - Meaning and definition of personality, characteristics of personality, Dimension of personality, Personality and Sports performance.
- 2.4 Mental Aspects – Attention, Interest, Motivation, Aggression, Emotion, Anxiety.

UNIT – 3: Social Science and Physical Education

- 3.1 Orthodoxy, customs, Tradition and Physical Education.
- 3.2 Importance of Festivals in physical Education.
- 3.3 Theories of Play, Socialization through Physical Education.
- 3.4 Social Group life Social conglomeration – Social group, Primary group and Remote group.

UNIT – 4: Culture and Physical Education

- 4.1 Features of culture, Importance of culture
- 4.2 Importance of sports in modern society
- 4.3 Effects of culture on people's lifestyle.
- 4.4 Different methods of studying (Observation/Inspection method
Questionnaire method, Interview method.)

Suggested Readings

1. B. J. Cratty. Psychology of Contemporary sports Champaign: Human Kinetics Publishers,
2. John M. Silva & Roberts. Psychological Foundations of Sport. Champaign: Human Kinetics Publishers.
3. Diane Gills, Psychological Dynamics of sports. Champaign: Human Kinetics Publishers.
4. Cox, Sports Psychology. Champaign: Human Kinetics Publishers.
5. Richard M. Sumin, "Psychology in Sports, Methods & Application. New Delhi: Surjeet Publication.

EC-301: Sports Medicine, Physiotherapy and Rehabilitation (Elective)

UNIT-1: Sports Medicine

- 1.1 Meaning and concept of sports medicine, Aim and objectives of sports medicine.
- 1.2 Development of sports medicine as discipline –aspect of sports medicine
- 1.3 Common regional injuries and their management- shoulder, elbow, wrist knee and ankle – signs , symptoms and diagnosis of injuries
- 1.4 Concept of doping and doping agents banded by WADA

UNIT-2: Physiotherapy

- 2.1 Brief introduction of Physiotherapy
- 2.2 Need and importance of Physiotherapy
- 2.3 Different types of therapeutic modalities (cryotherapy, superficial thermo therapy, penetrating thermotherapy, Electrical stimulation)
- 2.4 Guiding principles of therapeutic modalities

UNIT-3: Athletic Care and Massage

- 3.1 Prevention of athletic injuries – steps of prevention –pre-participation evaluation –Warm up and conditioning.
- 3.2 Emergency care in athletics and First aid – Meaning and principles – First aid care for I) Loss of consciousness II) control of bleeding III)Drowning and basic life support.
- 3.3 Protective and supportive equipment: Taping, Bandaging, padding and orthotics.
- 3.4 Massage: Classification – general principles, indication and contraindication.

UNIT –4: Rehabilitations

- 4.1 Concept and goal of rehabilitation
- 4.2 Principle of therapeutic exercises –Classification ,uses of
- 4.3 Passive movement and active movement
- 4.4 Mobility exercise

References:

1. Christine, M. D., (1999). Physiology of sports and exercise.USA: Human Kinetics.
2. Conley, M. (2000). Bioenergetics of exercise training. In T.R. Baechle, & R.W.Earle, (Eds.), Essentials of Strength Training and Conditioning (pp. 73-90). Champaign, IL: Human Kinetics.
3. David, R. M. (2005).Drugs in sports, (4th Ed). Routledge Taylor and Francis Group.
4. Hunter, M. D. (1979). A dictionary for physical educators. In H. M. Borrow & R. McGee, (Eds.), A Practical approach to measurement in Physical Education (pp. 573-74). Philadelphia: Lea &Febiger.

EC-302: CURRICULUM DESIGN AND GENDER EDUCATION (Elective)

UNIT-1: Modern concept of the curriculum

- 1.1 Meaning of Curriculum Design. Need and importance of curriculum development, the role of the teacher in curriculum development.
- 1.2 The role of the teacher in curriculum development.
- 1.3 Factors affecting curriculum-Social factors-Personnel qualifications-Climatic consideration
- 1.4 Steps in curriculum construction.

UNIT-2: Basic Guideline for curriculum construction.

- 2.1 Focalization, Socialization and Individualization
- 2.2 Steps in curriculum construction.
- 2.3 Principles of Curriculum design according to the needs of the students and state and national level policies.
- 2.4 Professional Competencies to be developed-Facilities and special resources for library, laboratory and other facilities.

UNIT-3: Concept on Gender

- 3.1 Meaning and concept on gender, Types
- 3.2 Types - Transgender and third gender, sex, patriarchy.
- 3.3 Gender bias, gender stereotyping, and empowerment
- 3.4 Equity and equality in relation with caste, class, religion, ethnicity, disability and region

UNIT-4: Gender and Education

- 4.1 Role of Teacher in the light of Gender Identity, Sexuality and Sexual harassment
- 4.2 Socialisation Practices in Family, Schools, and Other formal and informal organization
- 4.3 Schooling of Girls and Women Empowerment
- 4.4 Agencies perpetuating violence: Family, school, work place and media

Reference:

1. Barrow, H. M. (1983). Man and movement: principles of physical education. Philadelphia: Lea and Febiger.
2. Bucher, C. A. (1986). Foundation of physical education: St. Louis: The C. V. Mosby & Company.
3. Cassidy, R. (1986). Curriculum development in physical education. New York: Harper & Company.
4. Cowell, C.C. & Hazelton, H.W. (1965). Curriculum designs in physical education. Englewood Cliffs: N.J. prentice Hall Inc.
5. Larson, L.A. (n.d.). Curriculum foundation in physical education. Englewood Cliffs: N.J. Prentice Hall Inc.
6. Underwood, G. L. (1983). The physical education curriculum in secondary school: planning and implementation. England: Taylor and Francis Ltd.
7. Willgoose, C.E. (1979). Curriculum in physical education. 3rd Ed. Englewood Cliffs. N.J. Prentice Hall, Inc.

Semester – IV

Theory Courses

CC– 401: Measurement and Evaluation in Physical Education

UNIT- 1: Introduction to Test, Measurement & Evaluation

- 1.1 Meaning of Test, Measurement & Evaluation in Physical education
- 1.2 Need, Importance of Test, Measurement & Evaluation in Physical Education
- 1.3 Application of Test, Measurement & Evaluation in Physical Education
- 1.4 Principles of Evaluation

UNIT - 2: Criteria, Classification and Administration of Test

- 2.1 Criteria of a good Test and Scientific authenticity (reliability, objectivity, validity and availability of norms)
- 2.2 Types of Test
- 2.3 Difference between Physical Fitness Test, Motor Fitness test, and Sports Skill Test
- 2.4 Administration of test- Advance preparation, Duties during test and after test.

UNIT- 4: Physical Fitness; Motor Fitness and Cardio-respiratory Tests

- 3.1 AAHPER Youth Fitness Test
- 3.2 AAHPERD Health Related Physical Fitness Test
- 3.3 Indiana Motor Fitness Test and JCR test
- 3.4 Harvard Step test and Tattle pulse ratio test

UNIT- 5: Sports Skill Tests

- 4.1 Mitchel's modification of McDonald Soccer Test
- 4.2 Johnson Basketball Test
- 4.3 Lockhart and McPherson Badminton Test
- 4.4 Russel-Lange Volleyball Test
- 4.5 Schmithal-French Field Hockey Test

References:

1. Bangsbo, J. (1994). Fitness training in football: A scientific approach. Bagsvaerd, Denmark: Ho+Storm.
2. Barron, H. M., & Mcchee, R. (1997). A practical approach to measurement in physical education. Philadelphia: Lea and Febiger.
3. Barron, H.M. & Mcchee, R. (1997). A Practical approach to measurement in physical education. Philadelphia: Lea and Febiger.
4. Kansal, D.K. (1996). Test and measurement in sports and physical education. New Delhi: D.V.S. Publications.
5. Mathews, D.K., (1973). Measurement in physical education, Philadelphia: W.B. Saunders Company.
6. Pheasant, S. (1996). Body space: anthropometry, ergonomics and design of work. Taylor & Francis, New York.
7. Phillips, D. A., & Hornak, J. E. (1979). Measurement and evaluation in physical education. New York: John Wiley and Sons.
8. Sodhi, H.S., & Sidhu, L.S. (1984). Physique and selection of sports- a kinanthropometric study. Patiala: Punjab Publishing House.

CC-402: Kinesiology and Biomechanics

UNIT – 1: Introduction to Kinesiology and Sports Biomechanics

- 1.1 Meaning and Definition of Kinesiology, Biomechanics and Sports Biomechanics
- 1.2 Importance and Scope of Kinesiology and Sports Biomechanics in Physical Education and Sports Science
- 1.3 Terminology of Fundamental Movements
- 1.4 Fundamental Concepts of Following Terms – Axes and Planes, Centre of Gravity, Line of Gravity, Scalars and Vectors Quantities, Equilibrium.

UNIT – 2: Kinesiological Aspects of Human Movement

- 2.1 Classification of Joints and Muscles, Name of the Major Superficial Muscles, movements around the joints
- 2.2 Types of Muscle Contractions
- 2.3 Posture – Meaning, Types and Importance of Good Posture.
- 2.4 Fundamental Concepts of Following Terms- Angle of Pull, All or None Law, Reciprocal Innervations

UNIT – 3: Mechanical Concepts

- 3.1 Force - Meaning, Definition, Types, Units and its Application to Sports Activities
- 3.2 Lever - Meaning, Definition, Types and Body Lever. Wheel, Axel and Pulley.
- 3.3 Motion – Concept, Types and its Application to Sports Activities. Newton's Laws of Motion
- 3.4 Projectile Motion – Concept, Types, Principles and Factors Influencing Projectile Motion.

UNIT – 4: Kinematics and Kinetics of Human Movement

- 4.1 Linear Kinematics – Distance and Displacement, Speed and Velocity, Acceleration
- 4.2 Angular kinematics – Angular Distance and Displacement, Angular Speed and velocity, Angular Acceleration.
- 4.3 Linear Kinetics – Inertia, Mass, Momentum, Impulse, Friction.
- 4.4 Angular Kinetics – Moment of Inertia, Couple, Stability.

Reference:

1. Bunn, J. W. (1972). *Scientific principles of coaching*. Englewood Cliffs, N.J. Prentice Hall Inc.
2. Hay, J. G. & Reid, J. G. (1982). *The anatomical and mechanical basis of human motion*. Englewood Cliffs, N.J.: prentice Hall Inc.
3. Hay, J. G. & Reid, J. G. (1988). *Anatomy, mechanics and human motion*. Englewood Cliffs, N.J.: prentice Hall Inc.
4. Hay, J. G. (1970). *The biomechanics of sports techniques*. Englewood Cliffs, N.J.: Prentice Hall, Inc.
5. Simonian, C. (1911). *Fundamentals of sport biomechanics*. Englewood Cliffs, N.J.: Prentice Hall Inc.
6. Hall, J.S. (1991). *Basic Biomechanics*. The McGraw-Hill Companies, Inc. First Edition 1991, Brown and Benchmark Publishers.

CC– 403: Researches and Statistics in Physical Education

UNIT- 1: Introduction to Research

- 1.1 Definition of Research, Need and importance of Research in Physical Education and Sports.
- 1.2 Scope of Research in Physical Education & Sports.
- 1.3 Classification of Research
- 1.4 Research Problem, Quality of a good researcher

UNIT -2: Research Proposal and Project Report

- 2.1 Need for surveying related literature and Literature Sources
- 2.2 Research Proposal- Meaning and Significance of Research Proposal.
- 2.3 Preparation of a Project proposal and Project report.
- 2.4 Methods of Collection of data

UNIT-3: Basics of Statistical Analysis

- 3.1 Statistics: Meaning, Definition, Nature and Importance
- 3.2 Class Intervals: Raw Score, Continuous and Discrete Series
- 3.3 Frequency and Frequency Distribution, Construction of Frequency Distribution Tables
- 3.4 Graphical Presentation of Data: Histogram, Frequency Polygon, Frequency Curve.

UNIT-4: Statistical Models in Physical Education and Sports

- 4.1 Measures of Central Tendency: Mean, Median and Mode :
- 4.2 Definition, Importance, Advantages, Disadvantages and Calculation from Group and Ungrouped data
- 4.3 Measures of Variability: Meaning, importance, computing from group and ungroup data
- 4.4 Percentiles and Quartiles: Meaning, importance, computing from group and ungroup data

References:

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. Brown, L.E. & Ferrigno, V.A & Ferrigno, V.A., eds. 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.
12. Verma, J. P. (2000). A text book on sports statistics. Gwalior: Venus Publications.

EC- 401: Theory of Sports and Games (Elective)

UNIT – 1: Introduction

- 1.1 General Introduction of specialized game and sports: athletics, badminton, basketball, Volleyball, cricket, football, gymnastics, hockey, hand ball, kabaddi, kho-kho, tennis, Yoga. Each Game or sports to be dealt under the following heads: history and development of the game and of sports(any two)
- 1.2 Ground preparation, dimension and marking
- 1.3 Standard equipment and their specification
- 1.4 Ethics of sports and sportsmanship

UNIT – 2: Scientific principles of coaching (particular sports and game specific)

- 2.1 Motion- Types of motion and displacement, speed, Velocity, Acceleration, distance and Newton's Laws of motion.
- 2.2 Force- Friction, Centripetal and Centrifugal force, principles of force.
- 2.3 Equilibrium and lever: Their types
- 2.4 Sports training- Aims, Principles and characteristics. Training load- Component, principles of load, over load(Causes and symptoms), Crest load, Maximum and Sub maximum load.

UNIT – 3: Physical fitness components: (Particular sports and games specific)

- 3.1 Definition and types of speed, Strength and endurance.
- 3.2 Flexibility and its types.
- 3.3 Coordinative ability and its types
- 3.4 Training methods: Development of Components of Physical fitness and motor fitness through following training methods (Continuous method, Interval method, Circuit method, Fartlek and Weight Training)

UNIT – 4: Conditioning Exercise and warming up

- 4.1 Concept and conditioning of warming up
- 4.2 Role of weight training in games and sports
- 4.3 Teaching of fundamental skill and their mastery (Technique, Tactics and different phases of skill acquisition). Recreational and lead up games
- 4.4 Strategy- Offence and defense, Principles of offense and defense.

References:

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

EC-402: Sports Management (Elective)

UNIT – 1: Introduction to Sports Management

- 1.1 Nature, Scope and Purpose of Sports Management
- 1.2 Steps and Principles of Sports Management
- 1.3 Qualities and Competencies required for the Sports Manager
- 1.4 Event Management in Physical Education and Sports

UNIT – 2: Development of Leadership Qualities

- 2.1 Meaning and Definition of Leadership
- 2.2 Forms of Leadership- Autocratic, Laissez-faire, Democratic, Benevolent Dictator
- 2.3 Qualities of administrative Leader
- 2.4 Preparation of administrative Leader

UNIT – 3: Sports Management in Different Agencies

- 3.1 Sports Management in schools, Colleges and Universities
- 3.2 Factors affecting planning
- 3.3 Planning a school or college sports programme
- 3.4 Controlling a school, college and University sports programme- Developing Performance standard, establishing a reporting system, Evaluation

UNIT – 4: Financial Management in Physical Education

- 4.1 Financial Management in Physical Education and Sports in different Institutions
- 4.2 Budget-Meaning, Importance, Criteria of preparing a good Budget
- 4.3 Steps of Budget making
- 4.4 Principles of Budgeting

References:

1. Ashton, D. (1968). Administration of physical education for women. New York: The Ronald Press Co.
2. Bucher, C.A. Administration of physical education and athletic programme. 7th Edition, St. Louis: The C.V. Mosby Co.
3. Daughtrey, G. & Woods, J.B. (1976). Physical education and intramural programmes, organisation and administration. Philadelphia U.S.A.: W.B. Saunders Co.
4. Earl, F. Z., & Gary, W. B. (1963). Management competency development in sports and physical education. Philadelphia: W. Lea and Febiger.

Part – B
Practical Courses
Semester – I

Course Code	PAPER TITLE	Marks		
		Internal	External	Credit
PC-101	Track and Field	30	70	4
1.1	Running Events: Starting techniques: Standing start, Crouch start and its variations, Proper use of blocks. Finishing Techniques: Run Through, Forward lunging, Shoulder Shrug	24	56	
1.2	Marking, Rules and Officiating Hurdles: Fundamental Skills- Starting, Clearance and Landing Techniques. Types of Hurdles, Marking and Officiating.			
1.3	Relay: Baton Exchange for different distances, Understanding of Relay Zones, Marking and interpretation of rules and officiating	06	14	
PC-102	Swimming or Gymnastics	30	70	4
2.1	Gymnastics: Floor Exercise, Forward Roll, Backward Roll, Hand stand, Cart Wheel, Leg Split, Different dancing steps (Combination) Table Vault: Approach Run, Take off from the beat board, Cat Vault, Squat Vault. Men: Parallel bar, Horizontal bar/Roman rings, Rhythmic Gymnastics, Pyramid (Pair, Trio, Quadrates, Penthats) Women: Uneven bars, Balance Beam, Rhythmic Gymnastics, Pyramid (Pair, Trio, Quadrates, Penthats)	30	70	
2.2	Swimming: Floating, Gliding, Leg Action, Arm action, Breathing technique Introduction of various strokes : Front crawl, Back crawl, Butterfly, Brest Stroke: Starting Technique and entry into water Medley, Life Savings			
PC-103	March Past – 40 (Compulsory)	12	28	4
3.1	Mass Demonstration Activities: Bratachari – 20 (Compulsory) and Dumbbells/ Wands/ Hoop/ Umbrella/ Tipri//	06	14	
3.2	Malkhamb/ Lezium/ Callisthenics. (Any two): 20 + 20 = 40	12	28	

PC-104	Yoga:	18	42	4
4.1	<p>Surya Namaskar (Compulsary): 5 marks</p> <p>Sitting Position: Paschimottanasana, Gomukhasana, Ustrasana, Arda-maschandrasan Halasana, Salvasana, Sarvangasana, Chakrasana Vrikshasana, Padahastanasana, Trikonasana, Utkatasana.</p> <p>Pranamayama: Anulom-Bhilom, Bhastika, Bhramiri, Suryavedan-Chandravedan.</p> <p>Kapalbhati (Compulsary): 5 marks</p> <p>Kriya: Jalaneti, Sutraneti, Nauli, Dantdhouti. 15 marks.</p>	09	21	
		03	07	
		06	14	
4.2	<p>Weight Training: Crouch Sitting Position, Different types of grip, Standing with weight, Dead lift</p> <p>Curling: Two arm dumbbell curling, Barbell curling, Front Curling, Reverse Curling</p> <p>Dumbbell and Barbell press, Front and back press, Bench press (Incline & Decline)</p> <p>Squat: Front and back squat</p>	06	14	
4.3	<p>Aerobics: Low impact core moves - 1. March, 2. Side to side, 3. Double side to side, 4. grapevine, 5. Knee up, 6. Leg curl, 7. Toe touch, 8. Side lunge, 9. Back lunge, 10. Kick front, 11. Kick side, 12. Heel to raft, 13. 'E' shape, 14. 'v' shape</p> <p>15. Introduction of Bench Exercise</p>	06	14	

Semester – II

Corse Code	COURSE CODE			
		Marks		
PC-201	Track and Field Jumping: High Jump- Approach run, Take off, Bar clearance, Landing Or Pole vault: Approach, Planting, Riding, Bar clearance, Landing Jumping: Running Broad Jump and Triple Jump Approach Run, Take-off, Flight and Landing	Internal	External	Credit
		30	70	4
PC-202	Team Games: Football, Volleyball, Throwball, Netball, Softball. (Any two) (50x2 marks)	30	70	4
PC-203	Indigenous Sports: Kho-kho and Kabaddi. (50x2 marks)	30	70	4

Semester – III

Course Code	COURSE TITLE	Marks		
		Internal	External	Credit
PC-301	Track and Field: All throwing events.	30	70	4
PC-302	Combative Sports: Martial Art, Karate, Judo, Fencing, Boxing, Taekwondo, Wrestling, Lathi (Any two)	30	70	4
PC-303	Team Games: Handball, Cricket, Hockey, Basketball, Baseball. (Any two) (50x2 marks).	30	70	4

SEMESTER-IV

Course Code	PAPER TITLE	Marks		
		Internal	External	Credit
PC-401	Racket Sports: Table Tennis, Badminton, Tennis, Squash. (Any one): 40 marks. Measurement of AAHPERD Youth Fitness Test: 30 marks & Measurement of Motor Fitness Test: 30 marks.	30	70	4
PC-402	Layout and Officiating ability: Layout and Officiating ability of Track and Field events- 40 marks. Layout and Officiating ability of all Court Marking- 60 marks.	30	70	4

Part – C
Teaching Practice
Semester – II

TP-201	Teaching Practices: (20 Lessons Plan in school teaching for Internal Examination) (01 General Lessons Plan & 01 Specific Lessons Plan in school teaching for External Examination). (50+50=100).	60	4	30	70	100
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Semester – III

TP-301	Sports Specialization: Minimum 20 Internal Coaching Lessons Plan in schools. 02 External Coaching Lessons Plans in separate games in schools.	60	4	30	70	100
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Semester – IV

TP-401	Teaching Practice: Internal Teaching Lessons at school for Racket Sports, Team Games, Indigenous Sports – 20 Lessons. External Teaching Examination at school – 02 Lessons. (Racket Sports/ Team Games/ Indigenous Sports).	60	4	30	70	100
TP-402	Games Specialization: Internal Coaching Lessons Plans at school – 20 Lessons. External Coaching Lessons Plans at school – 02 Lessons in separate game.	60				100

Table–1: Semester wise distribution of hours per week

Semester	Theory	Practicum	Teaching practice	Total
<i>I</i>	16	24	00	40
<i>II</i>	16	18	06	40
<i>III</i>	16	18	06	40
<i>IV</i>	16	12	12	40
<i>Total</i>	64	72	24	160
Minimum of 36 teaching hours per week is required in five or six days in a week.				

Table–2: Number of credits per semester

Semester	Theory	Practicum	Teaching practice	Total
<i>I</i>	16	16	00	32
<i>II</i>	16	12	04	32
<i>III</i>	16	12	04	32
<i>IV</i>	16	08	08	32
<i>Total</i>	64	48	16	128
Minimum of 36 teaching hours per week is required in five or six days in a week.				

N.B : Practical Course content should be followed as per NCTE regulation- 2014.