

YMCA COLLEGE OF PHYSICAL EDUCATION

(An Autonomous College Affiliated to the Tamil Nadu Physical Education & Sports University)

NANDANAM, CHENNAI - 600 035.

Accredited by NAAC with "A" Grade

SYLLABUS



Bachelor of Physical Education (B.P.Ed.)

(Two Year)

2015 - 2017

BACHELOR OF PHYSICAL EDUCATION (B.P.Ed.)
TWO YEARS
CREDIT SYSTEM

Preamble:

Bachelor of Physical Education (B. P. Ed.) two years (Four Semesters 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, aim of Physical Education and communication skills. The programme comprises of compulsory and optional theory as well as practical courses and compulsory school internship/teaching practice.

1. Intake, Eligibility and Admission Procedure:

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

2. Duration:

The B.P.Ed programme is of a 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.

3. The Credit System:

All programmes shall run on Credit System (CS). 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.

4. Course:

The term course usually referred to, as 'papers' is a component of a programme. All courses 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. 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.

5. 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.

6. Evaluation:

6.1 Written Examination (20 Marks):

Each student will be graded by the subject teacher(s). Three sessional tests will be conducted for each paper. Each test carries a maximum of 20 marks and the average of best two tests will be considered. However, in the case of students who miss the tests for any valid reason with prior

permission from the subject teacher(s) and the Principal, they may be granted special permission to write the sessional test before the commencement of semester examinations.

6.2 Assignment (5 Marks):

The students will be given 5 marks for assignments. This may be in the form of Seminars, Projects, Written Materials, Records, etc., A student should submit a minimum of two assignments for each course.

6.3 Pre Semester (75 Marks):

The Pre Semester examinations will be held at the end of each semester before the final semester examinations, covering all portions and 75 marks are awarded for this examination. Each paper will be evaluated for 75 marks and this will be converted into 25 marks. All the examination will be conducted by the Controller of Examinations. The dated and test portions will be intimated in advance by staff concerned. There are no minimum marks for passing in both internal and external examinations. However, the minimum for passing in each paper is 50% combining internal and external marks. A student who fails in anyone or more papers in the semester examination, will be permitted to rewrite the paper or papers in the subsequent semester examinations.

First sessional test	=	20 Marks
Second sessional test	=	20 Marks
Third sessional test	=	20 Marks

Average of the best two tests	=	20 Marks
Assignment	=	5 Marks
Pre Semester converted to 25	=	25 Marks
Total	=	50/2
Internal	=	25 Marks

6.4 Theory:

Part I

- The Answer scripts are evaluated by both internal and external examiners (Double Valuation).
- If there is 10% difference between two examiners, a third revaluation is conducted, which will be final.
- Question papers for each examination will follow the regulation and syllabus in force at that time. The question paper pattern include both 5 marks and 10 marks.
 - Part A – Compulsory 10 Questions X 2 Marks = 20 Marks
 - Part B - 5 Questions out of 7 X 5 Marks = 25 Marks
 - Part C - 3 Questions out of 5 X 10 Marks = 30 Marks

a.
Total = 75 Marks
- A student getting 'RA' Re-Appear in a subject must repeat the examination to obtain the degree. Such students are exempted from attendance.
- A student shall not be permitted to repeat any course only for the purpose of improving the grade.

6.5 Practical:

There are no minimum marks for passing in both internal and external examinations. However, the minimum for passing in each practical is 50% of total marks in the particular practical. A student, who fails in any one or more practical in the semester examination, will be permitted to redo the practical(s) in the subsequent semester examinations.

Part – II Practicals:

Practical will be evaluated internally.

Part – III Teaching/Coaching Lessons and Intensive Teaching Practice:

I and II Semester:

Teaching practice (General and Particular) will be evaluated Internally

III Semester:

Intensive Teaching practice.

IV Semester:

Coaching lesson and Officiating will be evaluated Internally.

Teaching practice (General and Particular) will be evaluated Externally

6.6 Arrear Examinations:

Examination fees will be levied and collected normally according to the rules and regulations of the college. A special levy will be collected for supplementary paper.

6.7 Passing of Results:

Result will be approved by the Board of Examiners and will be submitted to the Academic Council of the college to recommend the eligible students for the award of the degree by Tamil Nadu Physical Education and Sports University.

7. Registration

7.1 Every student must register for the courses he/she intends to undergo in a semester. A registration form in triplicate can be obtained from the credit system office. A student should submit the duly filled in and signed registration form in triplicate with the subject teacher's and Principal's signature in the credit system office at the time of registration.

7.2 After admission to the programme, a code number will be assigned for each student, giving the year of admission and the student registration number.

7.3 The subject teacher shall advise the student about the academic programme and counsel him/her on the choice of courses (elective only) to be registered.

7.4 The college shall prescribe the maximum number of students in each course taking into account the physical facilities available. A course shall not be offered unless a minimum of 10 students register in either Core or Elective courses.

7.5 A course shall normally be taught by one staff.

8. Attendance:

8.1 A student must have 90% of attendance in theory and practical classes to write the semester examinations. A student with less than 90% of attendance will be given the grade 'RA'. (Re-Appeal due to lack of attendance)

8.2 A student having below 90% and above 50% attendance will not be allowed to write the exam in the semester. A student having below 50% attendance should repeat the course.

8.3 The student's attendance progress report would be displayed on the notice board every month.

9. Grading:

Once the marks of the CIA (Continues 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 sub heading letter grades and grade point 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 semesters also) starting from the first semester is indicated by Cumulative Grade Point Average (CGPA). These two are calculated by the following formula:

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

$$CGPA = \frac{\sum_{j=1}^N SGPA_j}{N}$$

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

10. 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.

11. 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
90 – 100	9.0 – 10.0	O	Outstanding
80 – 89.99	8.0 – 8.99	D+	Excellent
75 – 79.99	7.5 – 7.99	D	Distinction
70 – 74.99	7.0 – 7.49	A+	Very Good
60 – 69.99	6.0 – 6.99	A	Good
50 – 59.99	5.0 – 5.99	B	Average
00 – 49.99	0.0	RA	Re-Appear
Absent			

	CORE COURSE	ELECTIVE COURSE	PRACTICAL
SEM I	BCC 101 Principles and foundation of Physical Education and guidance and counselling BCC102 Anatomy and Physiology BCC 103 Yoga Education	BEC 104 Sports Nutrition and Weight Management BEC 105 Sports Management	BPC 106 Calisthenics, Minor games, BPC 107 Drill and Marching, Aerobics BPC 108 Badminton and Ball badminton, Softball, BPC 109 Table Tennis, Chess, Carrom and Tennis BPC 110 Track Events BPC 111 Teaching Practice
SEM II	BCC 201 History of Physical Education Recreation and Camping BCC 202 Organization, Administration and Methods of Teaching in Physical Education BCC 203 Principles and Techniques of Officiating Coaching Part I	BEC 204 Educational Technology and sports journalism and tourism BEC 205 Sports Medicine, Physiotherapy and Rehabilitation	BPC 206 Dhanda and baithaks, Light Apparatus, BPC 207 Yoga, Silambam BPC 208 Basketball, Volleyball, BPC 209 Football, Throwball BPC 210 Field Events BPC 211 Teaching Practice
SEM III	BCC 301 Sports Training BCC 302 Health Education and Environmental Studies BCC 303 Educational Psychology and Sociology	BEC 304 Computer Application in Physical Education BEC 305 Personality Development and Communication skills	BPC 306 Leziium, Kung fu BPC 307 Swiss ball and Core board Training, Tennikoit, BPC 308 Cricket, Archery BPC 309 Hockey, Netball, BPC 310 Throw Events BPC 311 Intensive Teaching Practice
SEM IV	BCC 401 Test and Measurement in Physical Education BCC 402 Kinesiology and Biomechanics BCC 403 Principles and Techniques of Officiating Coaching Part II	BEC 404 Contemporary issues in Physical Education fitness and wellness BEC 405 Elementary statistics	BPC 406 Malkhamband pyramid, Boxing BPC 407 Theraband and Ladder Training, Gymnastics, BPC 408 Kabaddi, Handball BPC 409 Khokho, Swimming, BPC 410 Coaching Lesson and Officiating BPC 411 External Teaching Practice

SEMESTER	MORNING PRACTICALS	EVENING PRACTICAL
I Semester	<ol style="list-style-type: none"> 1. Drill and Marching 2. Calisthenics 3. Minor games 4. Aerobics 5. Teaching practice -General and Particular Lesson 6. Track and field (Sprint, Relay, Hurdle, Middle and Long distance) 	<ol style="list-style-type: none"> 1. Badminton and Ball badminton 2. Softball 3. Table Tennis, Chess, Carrom 4. Tennis
II Semester	<ol style="list-style-type: none"> 1. Dhanda and baithaks 2. Light Apparatus(Dumbbells, Indian clubs, Hoops and Wands) 3. Yoga 4. Silambam 5. Teaching practice - General and Particular Lesson 6. Track and field (Long Jump, Triple Jump, High Jump, Pole Vault) 	<ol style="list-style-type: none"> 1. Basketball 2. Volleyball 3. Football 4. Throwball
III Semester	<ol style="list-style-type: none"> 1. Leziun 2. Swiss ball and Core board Training 3. Tennikoit 4. Kung fu 5. Teaching practice - General and Particular Lesson 6. Track and field (Shotput, Discus, Javelin, Hammer) 7. Intensive teaching practice 	<ol style="list-style-type: none"> 1. Cricket 2. Hockey 3. Netball 4. Archery
IV Semester	<ol style="list-style-type: none"> 1. Malkhamband pyramid 2. Theraband and Ladder Training 3. Gymnastics 4. Boxing 5. Teaching practice General and Particular 6. Coaching Lessonand Officiating 	<ol style="list-style-type: none"> 1. Kabaddi 2. Khokho 3. Swimming 4. Handball

SEMESTER I

Course	Title of the paper	L	T	P	Total Credits	Internal	External	Total
BCC 101	Principles and foundation of Physical Education and guidandce and counseling	4	0	0	4	25	75	100
BCC102	Anatomy and Physiology	4	0	0	4	25	75	100
BCC 103	Yoga Education	4	0	0	4	25	75	100
BEC 104	Sports Nutrition and Weight Management	1	0	0	1	25	75	100
BEC 105	Sports Management							
BPC 106	Calisthenics, Minor games	0	2	4	4	(Each 50 Marks)		100
BPC 107	Drill and Marching, Aerobics	0	2	4	4	(Each 50 Marks)		100
BPC 108	Badminton and Ball badminton, Softball,	0	2	6	5	(Each 50 marks)		100
BPC 109	Table Tennis, Chess, Carrom and Tennis	0	2	6	5	(Each 50 Marks)		100
BPC 110	Track Events	0	1	1	1.5	(Each 50 marks)		100
BPC 111	Teaching Practice	0	1	1	1.5	-		100

I Semester Total Credit = 34

SEMESTER II

Course	Title of the paper	L	T	P	Total Credits	Internal	External	Total
BCC 201	History of Physical Education Recreation and Camping	4	0	0	4	25	75	100
BCC 202	Organization and Administration and Methods of Teaching in Physical Education	4	0	0	4	25	75	100
BCC 203	Principles and Techniques of Officiating Coaching Part I	4	0	0	4	25	75	100
BEC 204	Educational Technology and sports journalism and tourism	1	0	0	1	25	75	100
BEC 205	Sports Medicine, Physiotherapy and Rehabilitation							
BPC 206	Dhands and baithaks, Light Apparatus	0	2	4	4	(Each 50 Marks)		100
BPC 207	Yoga, Silambam	0	2	4	4	(Each 50 Marks)		100
BPC 208	Basketball, Volleyball	0	2	6	5	(Each 50 marks)		100
BPC 209	Football, Throwball	0	2	6	5	(Each 50 Marks)		100
BPC 210	Field Events	0	1	1	1.5	(Each 50 marks)		100
BPC 211	Teaching Practice	0	1	1	1.5	-		100

II Semester Total Credit = 34

SEMESTER III

Course	Title of the paper	L	T	P	Total Credits	Internal	External	Total
BCC 301	Sports Training	4	0	0	4	25	75	100
BCC 302	Health Education and Environmental Studies	4	0	0	4	25	75	100
BCC 303	Educational Psychology and Sociology	4	0	0	4	25	75	100
BEC 304	Computer Application in Physical Education	1	0	0	1	25	75	100
BEC 305	Personality Development and Communication skills							
BPC 306	Lezium, Kung fu	0	2	4	4	(Each 50 Marks)		100
BPC 307	Swiss ball and Core board Training, Tennikoit	0	2	4	4	(Each 50 Marks)		100
BPC 308	Cricket, Archery	0	2	6	5	(Each 50 marks)		100
BPC 309	Hockey, Netball,	0	2	6	5	(Each 50 Marks)		100
BPC 310	Throw Events	0	1	1	1.5	(Each 50 marks)		100
BPC 311	Intensive Teaching Practice	0	1	7	4.5	-		100

III Semester Total Credit = 37

SEMESTER IV

Course	Title of the paper	L	T	P	Total Credits	Internal	External	Total
BCC 401	Test and Measurement in Physical Education	4	0	0	4	25	75	100
BCC 402	Kinesiology and Biomechanics	4	0	0	4	25	75	100
BCC 403	Principles and Techniques of Officiating Coaching Part II	4	0	0	4	25	75	100
BEC 404	Contemporary issues in Physical Education fitness and wellness	1	0	0	1	25	75	100
BEC 405	Elementary statistics							
BPC 406	Malkhamband pyramid, Boxing	0	2	4	4	(Each 50 Marks)		100
BPC 407	Theraband and Ladder Training, Gymnastics	0	2	4	4	(Each 50 Marks)		100
BPC 408	Kabaddi, Handball	0	2	6	5	(Each 50 marks)		100
BPC 409	Khokho, Swimming	0	2	6	5	(Each 50 Marks)		100
BPC 410	Coaching Lesson and Officiating	0	1	1	1.5	(Each 50 marks)		100
BPC 411	External Teaching Practice	0	1	1	1.5	-		100

IV Semester Total Credit = 34

TOTAL CREDITS IN BPED TWO YEARS COURSE

Semester	Credits in Theory Part I	Credits in Practical		Total
		Part II (Games and Other Activity)	Part III (Teaching/Coaching/ Internship)	
I	13	19.5	1.5	34
II	13	19.5	1.5	34
III	13	19.5	4.5	37
IV	13	19.5	1.5	34
TOTAL	52	78	9	139

Total credits = 34+34+37+34

Total credits = 139 credits

TOTAL MARKS IN BPED TWO YEARS COURSE

Semester	Marks in Theory Part I	Marks in Practical		Total
		Part II (Games and Other Activity)	Part III (Teaching/Coaching/ Internship)	
I	400	500	100	1000
II	400	500	100	1000
III	400	500	100	1000
IV	400	400	200	1000
TOTAL	1600	1900	500	4000

Provision of Bonus Credits Maximum 06 Credits in each Semester**Sr. No. Special Credits for Extra Co-curricular Activities Credit**

Sr.No	Special Credits for Extra Co-Curricular Activities	Credit
1	Sports Achievement at Stale level Competition (Medal Winner)	1
	Sports Achievement National level Competition (Medal Winner)	2
	Sports participationInternational 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
10	Intramural per semester	1

SEMESTER I

BCC 101 Principles and foundation of Physical Education and guidance and counseling

Unit – I: Introduction

- Meaning, Definition and Scope of Physical Education
- Aims and Objective of Physical Education
- Importance of Physical Education in present era.
- Misconceptions about Physical Education.
- Relationship of Physical Education with General Education.
- Physical Education as an Art and Science.

Unit- II – Foundation of Physical Education

- Philosophical foundation:
 - Idealism, Pragmatism, Naturalism, Realism, Humanism, Existentialism and Indian Philosophy and Culture.
- Fitness and wellness movement in the contemporary perspectives
- Sports for all and its role in the maintenance and promotion of fitness.

Unit-III- Principles of Physical Education

- Biological
- Growth and development
- Age and gender characteristics
- Body Types
- Anthropometric differences

Unit- IV – Psychological and Sociological principles of Physical Education

- Psychological
- Learning types, learning curve
- Laws and principles of learning
- Attitude, interest, cognition, emotions and sentiments
- Sociological
- Society and culture
- Social acceptance and recognition
- Leadership
- Social integration and cohesiveness

Unit-V- Guidance and Counselling

- Meaning, Definition of guidance and counseling
- Educational and vocational guidance, guidance for gifted, slow learners, the disadvantaged, under achievers, exceptional, juvenile developments, differentially abled
- Types of counseling
- Crisis, School, Individual, Peer and small group
- Role of counselor and the teacher in counseling.

References:

- 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.
- Mohan, V. M. (1969). Principles of physical education. Delhi: Metropolitan Book Dep.
- Nixon, E. E. and Cozen, F.W. (1969). An introduction to physical education. Philadelphia: W.B. Saunders Co.
- Obertuffer, (1970). Delbert physical education. New York: Harper and Brothers Publisher.

Sharman, J. R. (1964). Introduction to physical education. New York: A.S. Barnes and Co.
William, J. F. (1964). The principles of physical education. Philadelphia: W.B. Saunders Co.

BCC102 Anatomy and Physiology

UNIT-I Anatomy of the Human Body

- Brief Introduction of Anatomy and physiology in the field of Physical Education.
- Introduction of Cell and Tissue.
- The arrangement of the skeleton – Function - of the skeleton – Ribs and Vertebral column and the extremities – joints of the body and their types
- Gender differences in the skeleton.
- Types of muscles.

UNIT-II Important Organs and System Part - I

- **Blood and circulatory system:** Constituents of blood and their function –Blood groups and blood transfusion, clotting of blood, the structure of the heart-properties of the heart muscle, circulation of blood, cardiac cycle, blood pressure,. Cardiac output.
- **The Respiratory system:** The Respiratory passage – the lungs and their structure and exchange of gases in the lungs, mechanism of respiration (internal and external respiration) lung capacity, tidal volume.
- **The Digestive system:** structure and functions of the digestive system, Digestive organs, Metabolism

UNIT-III Important Organs and System Part – II

- **The Excretory system:** Structure and functions of the kidneys and the skin.
- **The Endocrine glands:** Functions of glands pituitary, Thyroid, Parathyroid. Adrenal, Pancreatic and the sex glands.
- **Nervous systems:** Function of the Autonomic nervous system and Central nervous system. Reflex Action,
- **Sense organs:** A brief account of the structure and functions of the Eye and Ear.

UNIT-IV Human Physiology

O Definition of physiology and its importance in the field of physical education and sports.

- Structure, Composition, Properties and functions of skeletal muscles.
- Nerve control of muscular activity:
- Neuromuscular junction
- Transmission of nerve impulse across it.
- Fuel for muscular activity
- Role of oxygen- physical training, oxygen debt, second wind, vital capacity.

UNIT-V Exercise and Physiology

- Effect of exercise and training on cardiovascular system.
- Effect of exercise and training on respiratory system.
- Effect of exercise and training on muscular system
- Physiological concept of physical fitness, warming up, conditioning and fatigue.
- Basic concept of balanced diet – Diet before, during and after competition.

References:

- Gupta, A. P. (2010). Anatomy and physiology. Agra: SumitPrakashan.
- Gupta, M. and Gupta, M. C. (1980). Body and anatomical science. Delhi: Swaran Printing Press.
- Guyton, A.C. (1996). Text book of Medical Physiology, 9th edition. Philadelphia: W.B. Saunders.
- 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.
- Moorthy, A. M. (2014). Anatomy physiology and health education. Karaikudi: Madalayam Publications.
- Morehouse, L. E. and Miller, J. (1967). Physiology of exercise. St. Louis: The C.V. Mosby Co.
- Pearce, E. C. (1962). Anatomy and physiology for nurses. London: Faber and Faber Ltd.
- Sharma, R. D. (1979). Health and physical education, Gupta Prakashan.
- Singh, S. (1979). Anatomy of physiology and health education. Ropar: Jeet Publications.

BCC 103 Yoga Education

Unit – I: Introduction

- Meaning and Definition of Yoga
- Aims and Objectives of Yoga
- Yoga in Early Upanisads
- The Yoga Sutra: General Consideration
- Need and Importance of Yoga in Physical Education and Sports

Unit - II: Foundation of Yoga

- The Astanga Yoga: Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana and Samadhi
- Yoga in the Bhagavadgita - Karma Yoga, Raja Yoga, Jnana Yoga and Bhakti Yoga

Unit - III Asanas

- Effect of Asanas and Pranayama on various system of the body
- Classification of asanas with special reference to physical education and sports
- Influences of relaxtive, meditative posture on various system of the body
- Types of Bandhas and mudras
- Type of kriyas

Unit – IV Yoga Education

- Basic, applied and action research in Yoga
- Difference between yogic practices and physical exercises
- Yoga education centers in India and abroad
- Competitions in Yogasanas

Unit – V Yoga for Fitness

Yoga for physical fitness – yoga for health and wellness – yoga for diseases – yogic practices for health living

References:

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

BEC 104 Sports Nutrition and Weight Management

Unit – I Introduction to Sports Nutrition

- Meaning and Definition of Sports Nutrition
- Basic Nutrition guidelines
- Role of nutrition in sports
- Factor to consider for developing nutrition plan

Unit – II Nutrients: Ingestion to energy metabolism

- Carbohydrates, Protein, Fat – Meaning, classification and its function
- 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 requirement and expenditure.

Unit – III Nutrition and Weight Management

- Meaning of weight management Concept of weight management in modern era Factor affecting weight management and values of weight management
- Concept of BMI (Body mass index),

Unit - IV Health Related Diseases

Health related diseases – life style management – Diabetes – Hypertension – Hyper glycemia – dyslipidemia and its risks - Nutrition – Daily calorie intake and expenditure, Determination of desirable body weight - Balanced diet for Indian School Children, Maintaining a Healthy.

Unit – V Life style Management and Preventive Measures

Lifestyle - Weight management program for sporty child, Role of diet and exercise in weight management, Design diet plan and exercise schedule for weight gain and loss.

References:

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

BEC 105 Sports Management

Unit-I Introduction

- Nature and Concept of Sports Management.
- Progressive concept of Sports management.

- The purpose and scope of Sports Management.
- Essential skills of Sports Management.
- Qualities and competencies required for the Sports Manager.
- Event Management in physical education and sports.

Sports Marketing

Unit-II Leadership

- Meaning and Definition of leadership
- Leadership style and method.
- Elements of leadership.
- Forms of Leadership.
- Autocratic
- Laissez-faire
- Democratic
- Benevolent Dictator
- Qualities of administrative leader.
- Preparation of administrative leader.
- Leadership and Organizational performance.

Unit-III Sports programme at school, college, university

- Sports Management in Schools, colleges and Universities.
- Factors affecting planning
- Planning a school or college sports programme.
- Directing of school or college sports programme.
- Controlling a school, college and university sports programme.

Unit-IV Maintenance of Records

Types of Registers and Records and its maintenance.

Developing performance standard

- Establishing a reporting system
- Evaluation
- The reward/punishment system

Unit – V Financial Management

- Financial management in Physical Education and sports in schools, Colleges and Universities.
- Budget – Importance, Criteria of good budget,
- Steps of Budget making
- Principles of budgeting

REFERENCES:

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

SEMESTER II

BCC 201 History of Physical Education Recreation and Camping

UNIT I: Historical Development of Physical Education in India

- Indus Valley Civilization Period
- Vedic Period
- Epic Period
- Historic Period
- Nalandha Period
- Rajput Period
- Muslim Period
- British Period
- Post Independent Development
- Contribution of Akhadas and Vyayamshals
- YMCA and its contribution to Physical Education

UNIT II Awards and Association

- National and International tournament in various games, world cup in various games
- Grand slam
- Inter university sports board
- National School Games Federation of India
- Indian Olympic Association
- National and state level associations
- Civilian awards, Arjuna, Dhoranacharya and Rajiv Gandhi Khel Ratna Award

UNIT III: Olympic games, Asian Games, Commonwealth Games and SAF games Sports bodies, tournaments and national awards

- Origin and development of Olympic, Asian, commonwealth and SAF games
- Ancient Olympics and Modern Olympics
- Physical education in Greece, Ancient Rome and Germany

UNIT IV: Recreation

- Meaning, Definition, aim, scope and significance of recreation
- Essential characteristics of recreation-
- Objectives of recreation
- Philosophy, objectives and relationship of play, leisure and recreation
- Historical development of recreation
- Recreation primitive culture, Greek Period, Roman period and middle age
- Recreation in U.S.A and India
- Organization and Administration of recreation
- Types of Recreation
- Recreation providing Agencies

UNITV: Camping

- Meaning definition aim, objectives and types of camp
- Selection, layout, scope and significance of camp
- Organization and administration of camp

- Types of camp activities
- Indoor and outdoor games, art and crafts, drama, music, dance, nature study, aquatics, hiking, hobbies, stunt and contest,
- Evaluation of camp work.

References:

- Anderson JM (1955). Industrial Recreation, McGraw-Hill Book Company, Inc, London
- Butler GD (1949). Introduction of Company Recreation, McGraw-Hill Book Company, Inc, New York.
- Danford HG (1953). Recreation in the American Community, Harper and Brothers Publishers, New York
- Jensen CR (1977). Leisure and Recreation, Introduction and Overview, Lea and Febiger, Philadelphia
- Kamlesh ML (1991). Principles and History of Physical Education, Prakash Bros., Patiala
- Nixon EJ and Lynn VC (1968). The World Today in Health, Physical Education and Recreation, Englewood Cliffs, Prentice Hall, New Jersey.
- Rayappa DJ and Govindarajulu LK (1949). Camping and Education, Jupiter Press Private Ltd, Madras.
- Torkildsen G (1986). Recreation Management, E & FN Spon Ltd., New York.
- Vandalen D and Bennett BLA (1971). World History of Physical Education, Prentice Hall, Englewood Cliffs, Prentice Hall Inc., New Jersey.
- Witt and Goodale (1985). Recreation and Leisure, Venture Publishing, Pennsylvania.

<p>BCC 202 Organization and Administration and Methods of Teaching in Physical Education</p>

Unit – I: Structure of Organization and Administration

- Meaning and importance of Organization and Administration in physical education
- Qualification and Responsibilities of Physical Education teacher and pupil leader
- Planning and their basic principles,
- Program planning: Meaning, Importance, Principles of program planning in physical education.

UNIT – II Functions of Organization and Administration

- Functions of Planning, organizing, staffing, directing, communicating, co-ordination, controlling, evaluating and innovating.
- Facilities and equipment management: Types of facilities Infrastructure-indoor, out door.
- Care of school building, Gymnasium, swimming pool, Play fields, Play grounds
- Equipment: Need, importance, purchase, care and maintenance.
- Time Table Management: Meaning, Need, Importance and Factor affecting time table.

Unit-III: Competition Organization

- Importance of Tournament,
- Types of Tournament and its organization structure - Knock-out Tournaments, League or Round Robin Tournaments, Combination Tournament and challenge Tournament.
- Organization structure of Athletic Meet
- Sports Event Intramurals and Extramural Tournament planning

Unit – IV Teaching Technique, Teaching Aids

- Teaching Technique – Lecture method, Command method, Demonstration method,
- Imitation method, project method etc.
- Teaching Procedure – Whole method, whole – part – whole method, part – whole method.
- *Class Management
- Presentation Technique – Personal and technical preparation
- Command- Meaning, Types and its uses in different situations.
- 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.

Unit – V 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.

Reference:

- Broyles, F. J. and Rober, H. D. (1979). Administration of sports, Athletic programme: A Managerial Approach. New York: Prentice hall Inc.
- Bucher, C. A. (1983). Administration of Physical Education and Athletic programme. St. Louis: The C.V. Mosby Co.
- Kozman, H.C. Cassidy, R. and Jackson, C. (1960). Methods in Physical Education. London: W.B. Saunders Co.
- Pandy, L.K. (1977). Methods in Physical Education. Delhi: Metropolitan Book Depot.
- Sharma, V.M. and Tiwari, R.H.: (1979). Teaching Methods in Physical Education. Amaravati: Shakti Publication.
- Thomas, J. P. (1967). Organization and administration of Physical Education. Madras: Gyanodayal Press.
- Tirunarayanan, C. and Hariharan, S. (1969). Methods in Physical Education. Karaikudi: South India Press.
- Voltmer, E. F. and Esslinger, A. A. (1979). The organization and administration of Physical Education. New York: Prentice Hall Inc.
- Bhatia, and Bhatia, (1959). The principles and methods of teaching. New Delhi: Doaba House.
- Kochar, S.K. (1982). Methods and techniques of teaching. New Delhi: Sterling Publishers Pvt. Ltd.
- Sampath, K., Pannirselvam, A. and Santhanam, S. (1981). Introduction to educational technology. New Delhi: Sterling Publishers Pvt. Ltd.
- Walia, J.S. (1999). Principles and methods of education. Jalandhar: Paul Publishers.

BCC 203 Principles and Techniques of Officiating and Coaching - Part I (Badminton, Ball Badminton, Softball, Table Tennis, Chess, Carrom, Tennis, Basketball, Volleyball, Football, Throwball, Track events and Jump events)

Unit – I Philosophy of officiating

- Qualification and Qualities of an official
- Philosophy of Officiating
- General principles of officiating

Unit – II Mechanism of officiating

- Pre, during and post Duties of official
- Mechanism of officiating
- Official Signals and powers
- System of officiating
- Position of officiating

Unit – III Lay out of track / event and Dimensions of play field

- Dimensions and lay out of play field
- Measurement and specification of equipment
- Track and field – Layout of track, sprint, hurdle, middle, long distance events, relay and Jump events

Unit – IV Rules and their Interpretations and

- Rules of the games and track and field events
- Score sheet of the games and track and field events
- Interpretations of the laws and rules
- Official signals

Unit – V Skills / Techniques and lead up games

- Skills and techniques
- Lead up games to develop the skill/technique

Reference:

- Buck Rules of Sports and Games, Published by NCYSI, New Delhi
- Jenson G. and Fisher AG, (1972). Scientific Basis of Athletic Conditioning, 2nd edition, Lea and Febigeer, Philadelphia
- Jones RJ and et.al., (1982). Guide to Effective Principles and Practices, Allyn and Bacon, Inc
- Lawther JD (1951). Psychology of Coaching, Prentice Hall, Inc, Englewood Cliffs, New Jersey
- Rules of Games, Published by International Association of Respective Sports and Games
- Singh H (1984). Sports Training, General Theory and Physical Fitness, NIS, Patiala
- Thomas JP (1971). Scientific Weight Training for Sports and Games, Gnanodaya Press, Madras
- Glady Kirubakar. S, (2009). Tennis Skills-A Teacher's Guide, SS Publication, Chennai
- Glady Kirubakar and Glory Kirubakar (2009). Play Ball Badminton, SS Publication, Chennai

BEC 204 Educational Technology and sports journalism and tourism

Unit – I Introduction to technology

- 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.

Unit – II Fundamentals of Journalism

- Ethics of journalism
- Cannon's of journalism
- Definition of journalism

Unit – III Sports Bulletins

- Journalism and sports education
- Structure of sports bulletin
- Types of bulletin and compiling a bulletin

Unit – IV Reporting

- Nature of sports reporting
- General news reporting
- Types of sports reporting
- Sports ethics and sportsmanship

Unit – V Sports tourism in India

- Need and scope of tourism
- Ethics of tourism
- Structure of tourism planning
- Analysis and field trip of sports in india
- Technological upgrading through field visits
- On the spot study and material collection of sport visits.

Reference:

- Bhardwaj, A. (2003). New media of educational planning. New Delhi: Sarup of Sons.
Ahiya, B.N. Theory and Practices of Journalism: Surjeet pilo
Ahiya and Choabra, Concise course in Reporting, Horward Publications
Verma, A.K. Advanced Journalism, Haranand Publications, Delhi

BEC 205 Sports Medicine, Physiotherapy and Rehabilitation

Unit-I: - Sports Medicine:

- Sports Medicine: Meaning, Definition, Aims, Objectives, Modern Concepts and Importance.
- Athletes Care and Rehabilitation: Contribution of Physical Education Teachers and Coaches.
- Need and Importance of the study of sports injuries in the field of Physical Education

Unit-II Preventive Measures and First Aid

- Prevention of injuries in sports – Common sports injuries – Diagnosis –
- First Aid - Treatment - Laceration – Blisters – Contusion - Strain – Sprain – Fracture – Dislocation and Cramps – Bandages – Types of Bandages – trapping and supports.

Unit-III: Physiotherapy

- Definition – Guiding principles of physiotherapy, Importance of physiotherapy,
- Introduction and demonstration of treatments - Electrotherapy – infrared rays –
- short wave diathermy – ultrasonic rays.

Unit-IV: Hydrotherapy:

- Introduction and demonstration of treatments of Cry therapy, Thermo therapy, Contrast
- Bath, Whirlpool Bath – Steam Bath – Sauna Bath – Hot Water Fomentation – Massage:
- History of Massage – Classification of Manipulation (Swedish System) physiological
- Effect of Massage.

Unit-V: Therapeutic Exercise:

- Definition and Scope – Principles of Therapeutic Exercise – Classification, Effects and
- uses of Therapeutic exercise – passive Movements (Relaxed, Forced and passive -
- stretching) – active movements (concentric, Eccentric and static) application of the
- therapeutic exercise: Free Mobility Exercise – Shoulder, Elbow – Wrist and Finger Joints
- Hips, Knee, ankle and Foot joints – Trunk. Head and Neck exercises.

References:

- Christine, M. D., (1999). Physiology of sports and exercise. USA: Human Kinetics.
- Conley, M. (2000). Bioenergetics of exercise training. In T.R. Baechle, and R.W. Earle, (Eds.), Essentials of Strength Training and Conditioning (pp. 73-90). Champaign, IL: Human Kinetics.
- David, R. M. (2005). Drugs in sports, (4th Ed). Routledge Taylor and Francis Group.
- Hunter, M. D. (1979). A dictionary for physical educators. In H. M. Borrow and R. McGee, (Eds.), A Practical approach to measurement in Physical Education (pp. 573-74). Philadelphia: Lea andFebiger.
- Jeyaprakash, C. S., Sports Medicine, J.P. Brothers Pub., New Delhi, 2003.
- Khanna, G.L., (1990). Exercise physiology and sports medicine. Delhi:Lucky Enterprises.
- Mathew, D.K. and Fox, E.L, (1971). Physiological basis of physical education and athletics. Philadelphia:W.B. Saunders Co.
- Pandey, P.K., (1987). Outline of sports medicine, New Delhi: J.P. Brothers Pub.
- Williams, J. G. P. (1962). Sports medicine. London: Edward Arnold Ltd.

SEMESTER III

BCC 301 Sports Training

Unit – I Introduction to Sports Training

- Meaning and Definition of Sports Training
- Aim and Objective of Sports Training
- Principles of Sports Training
- System of Sports Training – Basic Performance, Good Performance and High Performance Training

Unit – II Training Components

- Strength – Mean and Methods of Strength Development - types
- Endurance - Mean and Methods of Endurance Development - types

Unit – III

- Speed – Mean and Methods of Speed Development - types
- Coordination – Mean and Methods of coordination Development- types
- Flexibility – Mean and Methods of Flexibility Development - types

Unit – IV Training Process

- Training Load- Definition and Types of Training Load
- Principles of Intensity and Volume of stimulus
- Technical Training – Meaning and Methods of Technique Training
- Tactical Training – Meaning and Methods of Tactical Training

Unit – V Training programming and planning

- Periodization – Meaning and types of Periodization
- Aim and Content of Periods – Preparatory, Competition, Transitional etc.
- Planning – Training session
- Talent Identification and Development

Reference:

Dick, W. F. (1980). Sports training principles. London: Lepus Books.

Harre, D. (1982). Principles of sports training. Berlin: Sporulated.

Jensen, R. C. and Fisher, A. G. (1979). Scientific basis of athletic conditioning. Philadelphia: Lea and Fibiger, 2nd Edn.

Matvyew, L. P. (1981). Fundamental of sports training. Moscow: Progress Publishers.

Singh, H. (1984). Sports training, general theory and methods. Patials: NSNIS.

BCC 302 Health Education and Environmental Studies

Unit – I Health Education

- Concept, Dimensions, Spectrum and Determinants of Health
- Definition of Health, Health Education, Health Instruction, Health Supervision
- Aim, objective and Principles of Health Education
- Health Service and guidance instruction in personal hygiene

Unit – II Health Problems in India

- Communicable and Non Communicable Diseases, Diabetes and its prevention
- Obesity, Malnutrition, Adulteration in food, Environmental sanitation, Explosive
- Population,

- Personal and Environmental Hygiene for schools
- Objective of school health service, Role of health education in schools
- Health Services – Care of skin, Nails, Eye health service, Nutritional service, Health appraisal, Health record, Healthful school environment, first- aid and emergency care etc.

Unit – III Environmental Science

- Definition, Scope, Need and Importance of environmental studies.
- Concept of environmental education, Historical background of environmental education,
- Celebration of various days in relation with environment.
- Plastic recycling and probation of plastic bag / cover.
- Role of school in environmental conservation and sustainable development.

Unit – IV Natural Resources:

- Water resources, food resources and Land resources
- Definition, effects and control measures of:

Unit – V Pollution

- Air Pollution, Water Pollution, Soil Pollution, Noise Pollution, Thermal Pollution
- Management of environment and Govt. policies , Role of pollution control board.

References:

- Agrawal, K.C. (2001). Environmental biology. Bikaner: Nidhi publishers Ltd.
 Frank, H. and Walter, H., (1976). Turners school health education. Saint Louis: The C.V. Mosby Company.
 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.

BCC 303 Educational Psychology and Sociology

Unit -I: introduction

- Meaning, Importance and scope of Educational and Sports Psychology
- General characteristics of Various Stages of growth and development
- Types and nature of individual differences; Factors responsible -Heredity
- And environment
- Psycho-sociological aspects of Human behavior in relation to physical education and sports

Unit-II: Educational Psychology

- Nature of learning, theories of learning, Laws of learning,
- Learning Curve; and transfer of training
- Meaning and definition of personality, characteristics of personality,
- Dimension of personality, Personality and Sports performance

Unit-III: Motivation and Aggression

- Nature of motivation: Factors influencing motivation; Motivation and techniques and its impact on sports performance.
- Mental Preparation Strategies: Attention focus, Self- talk, Relaxation, Imaginary.
- Aggression and Sports, Meaning and nature of anxiety, Kinds of anxiety
- Meaning and nature of stress; Types of stress, Anxiety, Stress, Arousal and their effects on sports performance

*Introduction to Psycho regulatory procedure

Unit-IV: Relation between Social Science and Physical Education.

- Orthodoxy, customs, Tradition and Physical Education.
- Festivals and Physical Education.
- Socialization through Physical Education.
- Social Group life, Social conglomeration and Social group, Primary group and Remote group.

Unit-V Culture : Meaning and Importance.

- Features of culture,
- Importance of culture.
- Effects of culture on people life style.
- Different methods of studying Observation/ Inspection method, Questionnaire method, Interview method

References:

Ball, D. W. and Loy, J. W. (1975). Sport and social order; Contribution to the sociology of sport. London: Addison Wesley Publishing Co., Inc.

Blair, J. and Simpson, R. (1962). Educational psychology, New York: McMillan Co.

Cratty, B. J. (1968). Psychology and physical activity. Eaglewood Cliffs. Prentice Hall.

Kamlesh, M.L. (1998). Psychology in physical education and sport. New Delhi: Metropolitan Book Co.

Loy, J. W., Kenyon, G. S. and McPherson, B. D. (1978). Sport and social system. London: Addison Wesley Publishing Company Inc.

Loy, J. W., Kenyon, G. S. and McPherson, B. D. (1981). Sports culture and society. Philadelphia: Lea and Febiger.

Mathur, S.S., (1962). Educational psychology. Agra. Vinod Pustak Mandir.

Skinner, C. E., (1984.). Education psychology. New Delhi: Prentice Hall of India.

William, F. O. and Meyer, F. N. (1979). A handbook of sociology. New Delhi: Eurasia Publishing House Pvt Ltd.

BEC 304 Computer Application in Physical Education

Unit – I: 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

Unit – II: 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.

Unit – III: 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

Unit – 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

Unit – V: Internet

Internet – browsing – searching exam results – print and save – copying a webpage – searching image on web – searching videos on internet – creating an email account – attaching files – download a content from web – sending sms to mobile – sending e-greetings – online recharge – online bill payment – train ticket booking and checking availability – online newspaper reading.

References:

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

BEC 305 Personality Development and Communication skills

Unit I – Personality Development

- The concept of personality
- Self esteem
- Guidelines on personality
- Developing good personality

Unit II - Fundamental of Career rules

- Psychological position
- Better human relations
- Time Management
- Qualities of leaders

Unit III - Fundamental of Communication skills

- Concept of communication
- Basics of communication
- Theories of Motivation
- Communication goals
- Principles of communication
- Barriers of communication
- Real Communication
- Listening

Unit IV – Preparation

- Basic Grammar
- Concorde (Agreement of verb with the subject)

Unit V – Presentation

- Outline of your speech

- Effect of pleasant voice
- Analysing the occasion
- The audience and their psychology

Speech plan, art of speaking and class room seminar

Reference:

Abraham R, (1995). Personality Development, Communication Skills and Public Speaking, Saint Catherine Press, Chennai.

Dale Carnegie (1956). Public Speaking, Pocket Books Publication, New York.

Anthony D' Souza (1985). Personality Development, Being and Leader, Haggai Institute of Publication, Singapore.

Eric Watson (1980). Teach Yourself The Art of Conversation, 3rd edition, Hindi Pocket Books Publications, Delhi

Guilford JP (1959). Personality, McGraw Hill Ltd., New York.

SEMESTER IV

BCC 401 Test and Measurement in Physical Education

Unit- I Introduction to Test and Measurement and Evaluation

- Meaning of Test and Measurement in Physical Education
- Need and Importance of Test and Measurement in Physical Education
- Principles of Test and Measurement

Unit- II Criteria; Classification and Administration of test

- Criteria of good Test
- Criteria of tests, scientific authenticity (reliability, objectivity, validity and availability of norms)
- Type and classification of Test
- Administration of test, advance preparation – Duties during testing – Duties after testing.

Unit- III Physical Fitness Tests

- AAHPER youth fitness test
- National physical Fitness Test
- Indiana Motor Fitness Test
- JCR test
- U.S Army Physical Fitness Test

Unit- IV Health related fitness tests

- Health related fitness tests
- Cardio vascular endurance tests
- Muscular endurance tests
- Body fat analyzing test

Unit- V Sports Skill Tests

- Lockhart and McPherson badminton test
- Johnson basketball test
- McDonald soccer test
- S.A.I volleyball test
- S.A.I Hockey test

References:

- Bangsbo, J. (1994). Fitness training in football: A scientific approach. Bagsvaerd, Denmark: HoStorm.
- Barron, H. M., and Mchee, R. (1997). A practical approach to measurement in physical education. Philadelphia: Lea and Febiger.
- Barron, H.M. and Mchee, R. (1997). A Practical approach to measurement in physical education. Philadelphia: Lea and Febiger.
- Kansal, D.K. (1996). Test and measurement in sports and physical education. New Delhi: D.V.S. Publications.
- Mathews, D.K., (1973). Measurement in physical education, Philadelphia: W.B.Sounders Compnay.
- Pheasant, S. (1996). Body space: anthropometry, ergonomics and design of work. Taylor and Francis, New York.

Phillips, D. A., and Hornak, J. E. (1979). Measurement and evaluation in physical education. New York: John Wiley and Sons.

Sodhi, H.S., and Sidhu, L.S. (1984). Physique and selection of sports- a kinanthropometric study. Patiala: Punjab Publishing House.

BCC 402 Kinesiology and Biomechanics

Unit – I Introduction to Kinesiology and Sports Biomechanics

- Meaning and Definition of Kinesiology and Sports Biomechanics
- Importance of Kinesiology and Sports Biomechanics to Physical Education Teacher, Athletes and Sports Coaches.
- Terminology of Fundamental Movements
- Fundamental concepts of following terms – Axes and Planes, Centre of Gravity, Equilibrium, Line of Gravity

Unit – II Classification of Joints and muscles

- Classification of Joints and Muscles
- Types of Muscle Contractions
- Posture – Meaning, Types and Importance of good posture.
- Fundamental concepts of following terms- Angle of Pull, All or None Law, Reciprocal

Innovation

Unit – III Mechanical Concepts

- Force - Meaning, definition, types and its application to sports activities
- Lever - Meaning, definition, types and its application to human body.
- Newton's Laws of Motion – Meaning, definition and its application to sports activities.
- Projectile – Factors influencing projectile trajectory.

Unit – IV Kinematics and Kinetics of Human Movement

- Linear Kinematics – Distance and Displacement, speed and velocity, Acceleration
- Angular kinematics – Angular Distance and Displacement, Angular Speed and velocity,
- Angular Acceleration.
- Linear Kinetics – Inertia, Mass, Momentum, Friction.
- Angular Kinetics – Moment of inertia, Couple, Stability.

Unit – V Biomechanical Analysis

Biomechanical analysis of walking – jogging – running – jumping - throwing

Reference:

Bunn, J. W. (1972). Scientific principles of coaching. Englewood Cliffs, N.J.: Prentice Hall Inc.

Hay, J. G. and Reid, J. G. (1982). The anatomical and mechanical basis of human motion. Englewood Cliffs, N.J.: Prentice Hall Inc.

Hay, J. G. and Reid, J. G. (1988). Anatomy, mechanics and human motion. Englewood Cliffs, N.J.: Prentice Hall Inc.

Hay, J. G. (1970). The biomechanics of sports techniques. Englewood Cliffs, N.J.: Prentice Hall, Inc.

Simonian, C. (1911). Fundamentals of sport biomechanics. Englewood Cliffs, N.J.: Prentice Hall Inc.

BCC 403 Principles and Techniques of Officiating and Coaching - Part II (Cricket, Archery, Hockey, Netball, Boxing, Kabaddi, Handball, Khokho, Swimming, Gymnastics, Throw events)

Unit – I Philosophy of officiating

- Qualification and Qualities of an official
- Philosophy of Officiating
- General principles of officiating

Unit – II Mechanism of officiating

- Pre, during and post Duties of official
- Mechanism of officiating
- Official Signals and powers
- System of officiating
- Position of officiating

Unit – III Dimensions of play field / event

- Dimensions and lay out of the play field and throw events
- Specifications of the equipments

Unit – IV Rules and Interpretations

- Rules of the games and throw events
- Score sheet of the games and throw events
- Interpretations of the laws and rules
- Official signals

Unit – V Skills and lead up games

- Skills and techniques
- Lead up games to develop the skill/technique

References :

Buck Rules of Sports and Games, Published by NCYsI, New Delhi

Jenson G. and Fisher AG, (1972). Scientific Basis of Athletic Conditioning, 2nd edition, Lea and Febiger, Philadelphia

Jones RJ and et.al., (1982). Guide to Effective Principles and Practices, Allyn and Bacon, Inc

Lawther JD (1951). Psychology of Coaching, Prentice Hall, Inc, Englewood Cliffs, New Jersey

Rules of Games, Published by International Association of Respective Sports and Games

Singh H (1984). Sports Training, General Theory and Physical Fitness, NIS, Patiala

Thomas JP (1971). Scientific Weight Training for Sports and Games, Gnanodaya Press, Madras

BEC 404 Contemporary issues in Physical Education fitness and wellness

Unit – 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
- Physical Education and its Relevance in Inter Disciplinary Context.
-

Unit – II Fitness, Wellness and Lifestyle

- Fitness – Types of Fitness and Components of Fitness
- Understanding of Wellness
- Metabolic fitness – BP – LDL – Lipid profile - Triglyceride
- Physical Activity and Health Benefits

Unit – 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
- Concept of designing different fitness training program for different age group.

Unit – IV Safety Education and Fitness Promotion

- Health and Safety in Daily Life
- First Aid and Emergency Care

Unit – V Fitness Promotion

- Common Injuries and their Management
- Modern Life Style and Hypo-kinetic Disease –Prevention and Management

References:

Difiore, J.(1998). Complete guide to postnatal fitness. London: A and C Black,.

Giam, C.K and The, K.C. (1994). Sport medicine exercise and fitness. Singapore: P.G. Medical Book.

Mcglynn, G., (1993). Dynamics of fitness. Madison: W.C.B Brown.

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

BEC 405Elementary statistics

Unit-I Basics of Statistical Analysis

- Statistics: Meaning, Definition, Nature and Importance

* Types of Statistics

Unit-II Frequency Distribution

- Class Intervals: Raw Score, Continuous and Discrete Series, Class Distribution, Construction of Tables

Unit – III Graphical Representation

- Graphical Presentation of Class Distribution: Histogram, Frequency Polygon, Frequency Curve. Cumulative Frequency Polygon, Ogive, Pie Diagram

Unit- IV Measures of Central Tendency

- Measures of Central Tendency: Mean, Median and Mode-Meaning, Definition,
- Importance, Advantages, Disadvantages and Calculation from Grouped and Ungrouped Data

Unit- V Measures of Variation / Dispersion

- Measures of Variability: Meaning, importance, computing from group and ungrouped data
- Percentiles and Quartiles: Meaning, importance, computing from group and ungrouped data

References:

- Clark H.H. and Clark DH. (1967). Application of Measurement of Health and Physical Education, Prentice Hall., Inc.,
- Gupta S.P. (1982). Advanced Practical Statistics, New Delhi S. Chand and Co.
- Garrett, H.E. (1981). Statistics in psychology and education. New York: VakilsFeffer and Simon, Ltd.
- Verma, J. P. (2000). A text book on sports statistics. Gwalior: Venus Publications
- Larson LA and Yocom RD, (1951). Measurement and Evaluation in Physical Health and Recreation Education, St Louis, C.W. Mosby co.
- Mathew DK(1973). Measurement in Physical Education, London W.B. Saunders co.
- Wilks, SS (1984). Elementary Statistical Analysis, Oxford and IBH Publishing co, Calcutta.

Semester – I**BPC 106 Calisthenics, Minor Games****Calisthenics**

Introduction – two, four, eight and sixteen count exercises

Lunging – bending – turning – jumping – sitting – stepping – swinging exercises

Minor Games

Relay games – tag games – goal scoring games – point scoring games – miscellaneous games

BPC 107 Drill and Marching, Aerobics**Drill and Marching**

Introduction – fundamental position, fall in, fall out, attention and stand at ease

Dressing – right dress, eyes front

Turnings – mark time march – mark time with turns – quick march – right, left wheel – halting – saluting – fancy marching

Aerobics:

Introduction of Aerobics

- Rhythmic Aerobics - dance
- Low impact aerobics
- High impact aerobics
- Aerobics kick boxing
- Postures – Warm up and cool down
- THR Zone – Being successful in exercise and adaptation to aerobic workout.

BPC 108 Badminton and Ball Badminton, Softball**Badminton and Ball Badminton: Fundamental Skills**

- Racket parts, Racket grips, Shuttle Grips in badminton
- The basic stances.
- The basic strokes-Serves, Forehand-overhead and underarm, Backhand-overhead and underarm

*Drive shot – drop shot

Smashes

- Drills and lead up games
- Types of games-Singles, doubles, including mixed doubles.
- Rules and their interpretations and duties of officials.

Softball Fundamental Skills

- Catching: one handed, two handed, with feet grounded, in flight.
- Throwing (different passes and their uses): one handed passes (shoulder, high shoulder, underarm, bounce, lob); two handed passes (push, overhead, bounce).
- Footwork: landing on one foot; landing on two feet; pivot; running pass.
- Techniques of getting free: dodge and sprint; sudden sprint; sprint and stop; sprinting with change of speed.
- Defending: marking the player; marking the ball; blocking; inside the circle; outside the circle (that is, defending the circle edge against the pass in).
- Intercepting: pass; shot.
- The toss-up.
- Role of individual players
- Rules and their interpretations and duties of officials.

BPC 109 Table Tennis, Chess and Carrom, Tennis

Table Tennis:

- The Grip-The Tennis Grip, Pen Holder Grip.
- Service-Forehand, Backhand, Side Spin, High Toss.
- Strokes-Push, Chop, Drive, Half Volley, Smash, Drop-shot, Balloon, Flick Shot, Loop
- Drive.
- Stance and Ready position and foot work.
- Rules and their interpretations and duties of officials.

Chess

The Board and Notation, Initial Position, Moves, Capture, Pawns, The king's Special, Features, Check, Checkmate, Castling, Stalemate, Other kinds of Draws, Comparative Value of the Pieces, Additional Rules for tournaments, Planning, Method & The Time factor, A recap of all the chess terms, Three stages of the game - Open Openings, Semi-Open Openings, Closed Openings - Endings with Bishops and Several Pawns, Endings with White and Black Bishops, King, Bishop and Rook pawn versus King, Knight Endings, Intricate Endings
Rules and regulations

Carrom

Introduction of carom board. • Seating position. • Striker grip. • Basic rules. • Thumb shot. • Double shot. • Third shot. • Front shot. • Rebound. • Centre shot. • Straight shot.
Straight Shot, Normal Cut, Straight Cut, Negative Cut, Doubling, Punch, Press, Rebound, Coin to Coin Deflection, Striker's Deflection, Connection, Cut Return, Double Touch, Follow, Playing coin on the Baseline, Rolling of Striker.- Rules and regulations

Tennis:

- Grips- Eastern Forehand grip and Backhand grip, Western grip, Continental grip,
- Chopper grip.
- Stance and Footwork.
- Basic Ground strokes-Forehand drive, Backhand drive.

- Basic service.
- Basic Volley.
- Over-head Volley.
- Chop
- Tactics – Defensive, attacking in game
- Rules and their interpretations and duties of officials.

BPC 110 Track Events

Starting techniques: Sprint, Standing start, Crouch start and its variations, Proper use of blocks.

- Finishing Techniques: Run, Through, Forward lunging, Shoulder Shrug
- Ground Marking, Rules and Officiating
- Hurdles, Middle, Long distance running
 - Fundamental Skills- Starting, Clearance and Landing Techniques.
 - Types of Hurdles
 - Ground Marking and Officiating.
- Various patterns of Baton Exchange
- Understanding of Relay Zones
- Ground Marking
- Middle and long distance
- Interpretation of Rules and Officiating.

BPC 111 Teaching Practice

BPED students need to develop proficiency in taking General and Particular teaching practice lessons in indigenous activities and in other practical activities, sports and games learned in the BPEd course of study internally under school situation.

Semester – II

BPC 206 Dhands and Baithaks, Light Apparatus

Introduction – ordinary baithak, half and full, chair baithak, kneelling, namaskar, baithaks with jumps and turns, kundun, bajrang baithaks

Ordinary dhand, scorpion, circle, snake, leap, twist, leap with clap dhands

Light Apparatus: Dumbbells/ Wands/ Hoop/ Indian Clubs: Fundamentals skills

Light apparatus Grip

- Attention with apparatus/ Light apparatus
- Stand – at – ease with apparatus/ light apparatus
- Exercise with verbal command, drum, whistle and music – Two count, Four count, Eight count and Sixteen count.
- Standing Exercise
- Jumping Exercise
- Moving Exercise
- Combination of above all

BPC 207 Yoga, Silambam

Yoga:

- Surya Namaskara,
- Pranayams
- Corrective Asanas
- Kriyas
- Asanas
 - Sitting
 - Standing
 - Laying Prone Position,
 - Laying Spine Position

Silambam: Fundamental Skills

Grip and stick work – Hits- Cuts – Chops - Thrusts - Feint

Footwork without stick – with stick – three, four circle moves

One step – two step moves

Fundamental laws of silambam fencing

BPC 208 Basketball, Volleyball

Basket ball: Fundamental Skills

- Player stance and ball handling
- Passing-Two Hand chest pass, Two hand Bounce Pass, One Hand Base ball pass, Side
- Arm Pass, Over Head pass, Hook Pass.
- Receiving-Two Hand receiving, One hand receiving, Receiving in stationary position,
- Receiving while jumping, Receiving while running.
- Dribbling-How to start dribble, How to drop dribble, High dribble, Low dribble, Reverse
- dribble, Rolling dribble.
- Shooting-Lay up shot and its variations, one hand set shot, One hand jump shot, Hook
- shot, Free throw.
- Rebounding-Defensive rebound, Offensive rebound, Knock out, Rebound Organization.
- Individual Defensive-Guarding the man with the ball and without the ball.
- Pivoting.
- Rules and their interpretations and duties of the officials.

Volleyball: Fundamental Skills

- Players Stance-Receiving the ball and passing to the team mates,
- The Volley (Over head pass),
- The Dig(Under hand pass).
- Service-Under Arm Service, Side Arm Service, Tennis Service, Round Arm Service.
- Rules and their interpretations and duties of officials.

BPC 209 Football, Throwball

Football: Fundamental Skills

- Kicks-Inside kick, Instep kick, Outer instep kick, lofted kick
- Trapping-trapping rolling the ball, trapping bouncing ball with sole
- Dribbling-With instep, inside and outer instep of the foot.

- Heading-From standing, running and jumping.
- Throw in
- Feinting-With the lower limb and upper part of the body.
- Tackling-Simple tackling, Slide tackling.
- Goal Keeping-Collection of balls, Ball clearance-kicking, throwing and deflecting.

Throwball: Fundamental skills

Introduction

Catching – serving - Throwing – Footwork

- Role of individual players - rotation in throw ball
- Rules and their interpretations and duties of officials in both games

BPC 210 Jump Events

- Fundamental techniques in High Jump, Long Jump, Triple Jump, Pole Vault
- Specific warm up
- Ground Marking
- Interpretation of Rules and Officiating.

BPC 211 Teaching Practice

BPED students need to develop proficiency in taking General and Particular teaching practice lessons in indigenous activities and in other practical activities, sports and games learned in the BPED course of study internally under school situation.

Semester – III

BPC 306 Lezium, Kung fu

Lezium

Hindustani Lezuim-Char Awaaz, EkJagah, AantiLagaav, Pavitra, Do Rukh, Chau Rukh, Chau rukhbethak, Momiya.

GhatiLezuim-AathAawaaz, Bethakawaaz, AagePaon, Aagekadam, Do pherawaaz, Chau pherawaaz, Kadamtaal, Pavitra, Uchhakpavitra, Kadampavitra.

Kung fu: Fundamental Skills

- Player Stances – walking, hand positions, front-leaning, side-fighting.
- Hand Techniques
- Leg Techniques
- Forms
- Self Defense
- Rules and their interpretations and duties of officials.

BPC 307 Swissball and Core Board training, Tennikoit

Swissball training

Stretches – warm ups

Exercises for beginners – sub elite - elite

Core exercises and training loads

Chest exercises and training loads

Abdominal exercises and training loads

Arms exercises and training loads

Legs exercises and training loads

Total body workouts
Functional workouts
Coreboard training:
Balance exercise
Core stability drills
Drills on core board with dumbbells and medicine ball
Upper body exercises
Abs and crunches
Twisting knee raises and exercises for obliques
Exercises for hip – lower back - thigh
Tennikoit: Fundamental Skills
Holding the koit - warm up with the koit
Receiving and releasing the koit
Service - Forehand and Backhand service
Wrist work
Understanding foul strokes - wobbling, baulking, squeezing, jumping, pushing carrying, etc.,
Rules and interpretation, scoring.

BPC 308 Cricket, Archery

Cricket: Fundamental Skills

- Batting-Forward and backward defensive stroke
- Bowling-Simple bowling techniques
- Fielding-Defensive and offensive fielding
- Catching-High catching and Slip catching
- Stopping and throwing techniques
- Wicket keeping techniques

Archery: Fundamental skills

Fitting bow and arrow - choosing hand preference - determining eye dominance - determining draw length Fitting the arm guard and finger tab - nock locator set up
Shooting safely - attire - retrieving
T form stance - mimicking T form - bow hand position - wrist position – low, high and straight
Sighting and aiming
Anchoring
Performance analysis – horizontal, vertical and mixed pattern
Tuning and maintaining equipment
Rules and scoring

BPC 309 Hockey, Netball

Hockey: Fundamental Skills

- Player stance & Grip
- Rolling the ball
- Dribbling
- Push
- Stopping
- Hit
- Flick

- Scoop
- Passing – Forward pass, square pass, triangular pass, diagonal pass, return pass,
- Reverse hit
- Dodging
- Goal keeping – Hand defence, foot defence
- Positional play in attack and defense.
- Rules and their interpretations and duties of officials.
- Rules and their interpretations and duties of officials.
- Ground Marking.

Netball: Fundamental Skills

- Catching: one handed, two handed, with feet grounded, in flight.
- Throwing (different passes and their uses): one handed passes (shoulder, high shoulder, underarm, bounce, lob); two handed passes (push, overhead, bounce).
- Footwork: landing on one foot; landing on two feet; pivot; running pass.
- Shooting: one hand; two hands; forward step shot; backward step shot.
- Techniques of getting free: dodge and sprint; sudden sprint; sprint and stop; sprinting with change of speed.
- Defending: marking the player; marking the ball; blocking; inside the circle; outside the circle (that is, defending the circle edge against the pass in).
- Intercepting: pass; shot.
- The toss-up.
- Role of individual players
- Serving, catching, throwing and rotation in throw ball
- Rules and their interpretations and duties of officials in both games

BPC 310 Throw Events

Discus Throw, Javelin, Hammer throw, shot-put, Pole Vault

- Basic Skills and techniques of the Throwing events
- Ground Marking / Sector Marking
- Grip
- Stance
- Release
- Reserve/ (Follow through action)
- Rules and their interpretations and duties of officials

BPC 311 Intensive Teaching Practice
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BPED students need to develop proficiency in taking General and Particular teaching practice lessons in indigenous activities and in other practical activities, sports and games learned in the BPED course of study in the practicing school.

Semester – IV

BPC 406 Malkhamb and Pyramid, Boxing

Malkhamb and Pyramid

Malkhamb-Salaami, Hold, Saadiudi, Bagaludi, Dashrangudi, Bagliudi, Veludi, Soydoro, Phirki, Padmasana, T.Balance, Pataka, Landing.

- Rope Malkhamb-Salaami, PadmasanaChadh, Katibandh1-2, Sadiadhi, Rikebpakkad, Rikebpagniadhi, Kamaradhi, Nakkikasadhi, Kamaradhi, Nakkikasadhi, Urubandhtedhi,

Sadibagli, Do hatibagli, Kamarbandhbagli, nakkikasbagli, Dashrang, Hanuman pakad, Gurupakkad, various padmasana, Landing.

* Pyramid: two men formation, three men formation, etc., precautions and safety measures, moving pyramid, pillars and towers, etc.,

Boxing: Fundamental Skills

- Player stance
- Stance - Right hand stance, left hand stance.
- Footwork – Attack, defense.
- Punches – Jab, cross, hook, upper cut, combinations.
- Defense slip – bob and weave, parry/block, cover up, clinch, counter attack
- Tactics – Toe to toe, counter attack, fighting in close, feinting
- Rules and their interpretations and duties of officials.

BPC 407 Theraband and Ladder training, Gymnastics

Theraband training:

Theraband colour selection

Handling the theraband

Grip wrap - Palm wrap - Euro wrap

Creating loops - Handling the tubing - Securing the band tubing

Training for Postural development - Motor function - Muscle performance- Rehabilitation exercise

Stretching exercises for muscle length - Balance training - Cardio training exercises

Functional and sport-specific training

Ladder training:

One foot in hole

Two feet in hole

Lateral in and out

Linear in and out

Cross over front and behind

Shuffle - side steps - hops and run - cross over run - side straddle hop

Functional ladder drills

Gymnastics:

Floor Exercise

o Forward Roll, Backward Roll, Sideward Roll, different kinds of scales, Leg Split, Bridge,

Dancing steps, Head stand, Jumps-leap, scissors leap, cart wheel, one arm cart wheel, rolls,

Tumbling - full twisting backward somersault - knees and shoulders spring - doubles forward

roll - back flip toe pitch

- Vaulting Horse

- Approach Run, Take off from the beat board, Cat Vault, Squat Vault.

Pommel Horse:

Front vault - squat stand leap - flank vault - stoop, straddle vault - hand spring

BPC 408 Kabaddi, Handball

Kabaddi: Fundamental skills

- Skills in Raiding-Touching with hand, various kicks, crossing of baulk line, Crossing of

- Bonus line, luring the opponent to catch, Pursuing.
- Skills of Holding the Raider-Variou formations, Catching from particular position, Different catches, Luring the raider to take particular position so as to facilitate catching,
- catching formations and techniques.
- Additional skills in raiding-Bringing the antis in to particular position, Escaping from
- various holds, Techniques of escaping from chain formation, Combined formations in
- offence and defense.
- Ground Marking, Rules and Officiating

Hand Ball: Fundamental skills

- Fundamental Skills-Catching, Throwing, Ball Control, Goal Throws-Jump Shot, Centre Shot, Dive Shot, Reverse Shot, Dribbling-High and Low, Attack and Counter Attack, Simple Counter Attack, Counter Attack from two wings and centre, Blocking, Goal keeping, Defense.
- Rules and their interpretations and duties of officials.

BPC 409 Khokho, Swimming

Kho Kho: Fundamental skills

- General skills of the game-Running, chasing, Dodging, Faking etc.
- Skills in chasing-Correct Kho, Moving on the lanes, Pursuing the runner, Tapping the inactive runner, Tapping the runner on heels, Tapping on the pole, Diving, Judgement in giving Kho, Rectification of Foul.
- Skills in Running-Zig zag running, Single and double chain, Ring play, Rolling in the sides, Dodging while facing and on the back, fakes on the pole, fake legs, body arm etc, Combination of different skills.
- Ground Marking
- Rules and their interpretations and duties of officials.

Swimming: Fundamental Skills

- Entry into the pool.
- Developing water balance and confidence
- Water fear removing drills.
- Floating-Mushroom and Jelly fish etc.
- Gliding with and without kickboard.
- Body Position, Leg, Kick, Arm pull, Breathing and Co ordination.
- Start and turns of the concerned strokes.
- Introduction of Various Strokes.
- Water Treading and Simple Jumping.
- Starts and turns of concerned strokes.
- Rules of Competitive swimming-officials and their duties, pool specifications, seeding heats and finals, Rules of the races.
- Fundamental skills
- Swim with the ball

BPC 410 Coaching Lesson and Officiating

BPED students need to develop proficiency in taking coaching lessons in their specialized sports and games.

