COOCH BEHAR PANCHANAN BARMA UNIVERSITY

PANCHANAN NAGAR, VIVEKANANDA STREET, COOCH BEHAR – 736101

4 Year Under Graduate Degree (Honours)
In Physical Education

Programme Objective:

1. *Explain the gross morphology, structure and functions of various organs of the human body*
2. *Describe the various homeostatic mechanisms and their imbalances*
3. *Identify the various tissues and organs of different systems of human body*
4. *Perform the various experiments related to special senses and nervous system*
5. *Appreciate coordinated working pattern of different organs of each system*

Programme Outcome:

1. *Students are provided case study scenarios and they determine if the scientist is conducting an anatomical or physiological study.*
2. *Students are tasked to identify the function, location, and organs involved in each body system, then to re-enforce knowledge, they are asked to draw a picture.*

Course: *Major 3rd*
Paper Name: ANATOMY, PHYSIOLOGY & EXERCISE PHYSIOLOGY
Paper Code: PED-MAJ 3

UNIT- I: INTRODUCTION

1.1 Meaning and definition of Anatomy, Physiology and Exercise Physiology
1.2 Importance of Anatomy, Physiology and Exercise Physiology in the field of Physical Education and Sports
1.3 Human Cell- definition, structure and functions
1.4 Tissue- definition, types and functions

UNIT- II: MUSCULO-SKELETAL SYSTEM

2.1 Skeletal System- Structure of Skeletal System. Classification and location of bones and joints.
2.2Anatomical differences between male and female
2.3 Muscular System- Type, location, function and structure of muscle, types of muscular contraction
2.4 Effect of exercise and training on muscular system

UNIT- III: CIRCULATORY AND RESPIRATORY SYSTEM

3.1 Blood- Composition and function. Structure, location and functions of human heart. Mechanism of blood circulation through human heart
3.2 Blood pressure, athletic heart and bradycardia. Effect of exercise and training on circulatory system
3.3 Structure and function of Respiratory organs. Mechanism of internal and external Respiration
4.4 Lung Capacity, Vital Capacity, O2 Debt and Second Wind. Effect of exercise and training on Respiratory system

UNIT- IV: DIGESTIVE, EXCRETORY AND ENDOCRINE SYSTEM

4.1 The Digestive system- structure and functions of digestive system
4.2 Digestive organs- Digestion and absorption of carbohydrate protein and fat
4.3 The Excretory system- Structure and functions of the Kidneys and the Skin
4.4 The Endocrine System- Functions of Pituitary, Thyroid, Parathyroid and Adrenal

References:

1. Amrit Kumar, R, Moses. (1995). Introduction to Exercise Physiology. Madras: Poompugar Pathipagam.
2. Clarke, D.H. (1975). Exercise Physiology. New Jersey: Prentice Hall Inc., Englewood Cliffs.
3. David, L Costill. (2004). Physiology of Sports and Exercise. Human Kinetics.
4. Fox, E.L., and Mathews, D.K. (1981). The Physiological Basis of Physical Education and Athletics. Philadelphia: Sanders College Publishing.
5. Guyton, A.C. (1976). Textbook of Medical Physiology. Philadelphia: W.B. Sanders co. Richard, W. Bowers. (1989). Sports Physiology.
   WMC: Brown Publishers.
6. Sandhya Tiwaji. (1999). Exercise Physiology. Sports Publishers.
7. Shaver, L. (1981). Essentials of Exercise Physiology. New Delhi: Subject Publications.
8. Vincent, T. Murche. (2007). Elementary Physiology. Hyderabad: Sports Publication
9. William, D. Mc Aradle. (1996). Exercise Physiology, Energy, Nutrition and Human Performance. Philadelphia: Lippincott Williams and Wilkins Company.

COOCH BEHAR PANCHANAN BARMA UNIVERSITY

PANCHANAN NAGAR, VIVEKANANDA STREET, COOCH BEHAR – 736101

4 Year Under Graduate Degree (Honours)
In Physical Education

Programme Objective:

1. Students may understand the Yoga Education
2. Students may learn the Yoga; asanas, Pranayamas, Bandhas and Mudras.

Programme Outcome:

1. Students may know to brutes for different yogic exercises.
2. This subject may generate vibration for further development of Yoga; asanas, Pranayamas, Bandhas and Mudras

Course: *Major*
Paper Name: YOGA EDUCATION
Paper Code: PED-MAJ 4

UNIT I: INTRODUCTION OF YOGA EDUCATION

1.1 Meaning, Misconception and Definition, Aim and Objective of Yoga.
1.2 History of Yoga: Types of Yoga (Karma Yoga, Raj Yoga, Jnana Yoga and Bhakti Yoga).
1.3 Need and importance of Yoga in Physical Education and Sports in modern era.
1.4 Differences between Yogic Practice and Physical Exercise. Preparation of yogic practice: Time, Place, Food, Dress, and Contra indication

UNIT II – FOUNDATION OF YOGA

2.1 Astanga Yoga: Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana and Samadhi and their implication of our Society
2.2 Yoga Sutra: Classification of Asanas with special reference to Physical Education and Sports.
2.3 Concept and definition of Kriya, types and its benefits. (Kapalbahati, Neti, Dhauti, Nauli and Trataka)
2.4 Common Yogic practice protocol referred by AYUSH. International Yoga Day. Contribution of any two yogis'

UNIT –III PRINCIPLES, MECHANISM AND EFFECTS

3.1. Aim, Objectives, Principles and types of Asanas, Bandhas and Mudras
3.2. Effects of Yogic Practice on Nervous, Cardio-respiratory and Musculo-skeletal system
3.3. Effects of Bandhas & Mudras described in Hatha Yoga
3.4. Pranayama: Mechanism and its effects on various system of body and on mind.

UNIT –IV APPLICATION OF YOGA

4.1. Meaning, types and principles of Meditation
4.2. Yoga for Stress, Anxiety, and Depression Management
4.3. Yoga as a preventive medicine in modern Era
4.4. Therapeutic uses of Yoga in the Present Society

References:

1. Muktibodhananda S. (2013). *Hatha Yoga Pradipika*, Munger, Bihar School of Yoga Publication (3rd ed.). ISBN-10:9788185787381.
2. Niranjananda S. S. *GherandaSamhita*. (2012). Munger, Bihar School of Yoga. Publication ISBN-9789381620199.
3. Maheshananda S, Sharma B.R., Sahay GS, BodhaR. K, Jha B. L, Bharadwaj C.L. (2009). *Siva Samhita*.Lonavalla,Kaivalyadhama Publication. ISBN: 9788189485535.
4. Maheshananda S, Sharma B.R, Sahay G.S. (2005). *Vasistha Samhita*. Lonavalla Kaiva lyadhama Publication. ISBN:8189485377.
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6. Satyananda S.S. (2004). *Asana Pranayama Mudra Bandha*,Munger,Yoga Publications Trust, Bihar,India. ISBN: 8186336141.
7. Nagarathna R, Nagendra H.R. (2008).*Yoga for Promotion of Positive Health* Vivekananda Yoga Research Foundation Swami Vivekananda Yoga Prakashana ISBN:9788187313083.
8. Iyengar B.K.S. (2003). *Light on Yoga*, USA, HarperCollins. ISBN: 8172235011.
9. Mondal S. (2013). Science of exercise: ancient Indian origin. *J Assoc Physicians India* . 61: 40-42.

COOCH BEHAR PANCHANAN BARMA UNIVERSITY

PANCHANAN NAGAR, VIVEKANANDA STREET, COOCH BEHAR – 736101

4 Year Under Graduate Degree (Honours) In Physical Education

Programme Objective:

1. *To help understand the importance of a healthy lifestyle*
2. *To familiarize students about physical and mental health*
3. *To create awareness of various life style related diseases*
4. *To provide understanding of stress management*

Programme Outcome:

1. Improved understanding of the importance of maintaining a healthy lifestyle
2. Improved understanding of movement and the human body
3. Improved knowledge of rules and strategies of particular games and sports
4. Self-confidence and self-worth as they relate to physical education recreation programs.

Course: *Major*
Paper Name: HEALTH EDUCATION, FITNESS AND WELLNESS
Paper Code: PED-MAJ 5

UNIT – I: HEALTH AND HEALTH EDUCATION

1.1. Health- Meaning, Definition, Dimension and Factor effecting health

1.2. Health Education- Meaning, Definition, Aims, Objectives and Principles

1.3. School Health Program- Health Service, Health Instruction, Health Supervision, Health Appraisal and Health Record, Personal hygiene.

1.4 Aim, Objectives and Function- National Institute of Health & Family Welfare (NIHFW), World Health Organization (WHO), United Nations Educational Scientific and Cultural Organization (UNESCO) and United Nations International Children's Emergency Fund (UNICEF) and AYOUSH

UNIT- II: HEALTH PROBLEMS IN INDIA- PREVENTION AND CONTROL

2.1 Communicable Diseases- Meaning, Definition, and Types. Causes, Prevention and Control of Malaria, Dengue and Chicken Pox and Diarrhea

2.2. Hypokinetic Disorder- Meaning, Definition, and Causes. Management of Obesity, Diabetes, Asthma and Cardio Vascular Disorder

2.3 Nutrition- Nutrients and their functions and Daily Requirements. Balance Diet. Balance Diet Growing ups, Adults and Athletes. Health Disorder Due to deficiency of Protein, Vitamin and Minerals

2.4. Posture: Meaning and Definition. Types of Postural Deformities . Causes and corrective exercises for Kyphosis, Lordosis, Scoliosis, Bow-leg, Knock Knee, Flat Foot. Importance of Good Posture

UNIT –III: – FITNESS

3.1 Meaning, Definition, Need and Importance of Fitness and Physical Fitness

3.2 Types of Physical Fitness Components. Meaning, definition and Usefulness of Health-related and Sports- performance Related Physical Fitness Components

3.3 Ageing- Meaning and Definition. Aging Phenomenon. Role of Exercise in healthy Aging

3.4 Contemporary Health Problems of College Youth- Alcohol, Drugs, Tobacco, (Chewing, Sniffing, Smoking) their Harmful Effects. Substance Abuse Management

Unit –IV: WELLNESS

4.1 Wellness- Concept, Definition, Dimension, Significance with reference to Positive Lifestyle

4.2 Concepts of Quality of Life and Body Image. Relationship between Physical Activities and Wellness

4.3 Factor affecting wellness

4.4 Scope of Wellness. Modern trends in Wellness

References:

1. Park J.E. & Park K. (2002). Textbook of preventive and social medicine. Jabalpur: Banarasi Das Bhanot Publication.
2. K. Tones, Y.K. Robinson's, S. Tilfor (2013). Health Education, Springer.
3. UGC (2005). Textbook of Environmental Studies, University Press.
4. A.C. Pandey (2013). "Ozone" Academic Excellence, New Delhi.
5. L.B. Lave, E.P. Seskin (2013). Air Pollution and Human Health, Ref. Press, New York.
6. P.K. Gupta (2001) Methods in Environmental Analysis, Water, Soil and Air, AGROBIOS (India).
7. WHO (2006) Preventing diseases through healthy environment.
8. P. Elliot, J.C. Wakefield, N.G. Best, D.J. Biggs (2000). Spatial Epidemiology: Methods and Application.
9. W.P. Cummingham, B.W. Saigo (2001). A Global Concern, Cummingham

COOCH BEHAR PANCHANAN BARMA UNIVERSITY

PANCHANAN NAGAR, VIVEKANANDA STREET, COOCH BEHAR – 736101

4 Year Under Graduate Degree (Honours)
In Physical Education

Programme Objective:

1. Students may understand the Track and Field Events
2. Students may learn the official of Field Events

Programme Outcome:

1. The students learn the various techniques along with the international rules of the events.
2. The Students learn the rules; they can become qualified state, national and international officials.

Course: *Major 6th*
Paper Name: TRACK AND FIELD (PRACTICAL)
Paper Code: PED-MAJ 6

UNIT-I: RUNNING EVENTS

1.1. Starting techniques: Standing start, Crouch start and its variations (use of starting block).

1.2. Acceleration with proper running technique – arm action, knee action and stride length. Finishing Techniques: Run Through, Forward lunging, Shoulder Shrug.

1.3. Relay race: starting, Baton holding/carry, exchange between the zone and finishing.

UNIT-II: JUMPING EVENT (Any One)

2.1. Long Jump: Approach Run, Take off, Flight in the air, Landing and dispatch from jumping pit. (Hang Style/Hitch kick).

2.2. Triple Jump: Approach Run, Take off, landing for hop, steps and flight in the air, Landing and dispatch from jumping pit.

2.3. High Jump Techniques: Approach Run, Take off, Clearance over the bar and landing (Straddle Roll/ Fosbury Flop).

UNIT – III: THROWING EVENTS (Any One)

3.1. Putting the shot: Grip, placement, initial stance, throwing stance, release and recovery (Perri O'Brien/Disco Put technique).

3.2. Discus technique: Grip, Stance, wind up, Starting the throw, Bringing the turn to the center of the ring, complete the turn to the center of the ring, turn to power position, release and recovery (Rotation in the circle).

3.3 Javelin techniques: Grip, initial stance, carrying Javelin, impulse stride, release and recovery.

Note: Content of Practical Notebook

1. History
2. Lay out of Track and field events with diagram.
3. Rules and regulation of the event.
4. Description of techniques with suitable diagram
5. Indian performance respecting events.

COOCH BEHAR PANCHANAN BARMA UNIVERSITY

PANCHANAN NAGAR, VIVEKANANDA STREET, COOCH BEHAR – 736101

4 Year Under Graduate Degree (Honours)
In Physical Education

Programme Objective:

1. To develop the basic understanding of biomechanics and kinesiology and its application in human body movements in performing sports activities.
2. To explain the concept of mechanical laws involved in human motion.
3. To develop a comprehensive understanding of movement analysis
4. To develop the ability to perform mechanical analysis of various fundamental movements and sports skills

Programme Outcome:

1. Explain the basic mechanical concepts and will be able to interpret its relation to human body movements
2. Organize and specify the overall goal of the course.
3. Apply and analyze the factors of mechanical laws involved in human movement.
4. Explain the principles of movement analysis
5. Analyze the mechanical principles of motor skills and sports related skills along with their proper techniques and corrective measures.

Course: *Major 7th*
Paper Name: APPLIED KINESIOLOGY & SPORTS BIOMECHANICES
Paper Code: PED-MAJ 7

UNIT-I: INTRODUCTION

1.1 Meaning and Definition of Kinesiology and Sports Biomechanics, Need and importance of Kinesiology and Sports Biomechanics in Physical Education and Sports.
1.2 Fundamental Movements: Around Synovial join in Relation with Physical Education and Sports
1.3 Fundamental concepts of following terms in relation with Physical Education and Sports - Axes and Planes, Centre of Gravity, Equilibrium, Equilibrium and its types, Line of Gravity.
1.4 Involvement of Various Muscles during Different function auxiliary Movements of Hip, Knee, Shoulder, Elbow, Shoulder Girdle and Trunk Region

UNIT- II: KINESIOLOGICAL ASPECT OF HUMAN MOVEMENT

2.1 Classification of Joints and Muscles, Kinesiological Classification of Muscles- Agonists, Antagonists, Synergists
2.2 Origin and insertion and action of major voluntary Muscles, 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 and Reciprocal Inhibition.

UNIT- III: MECHANICAL CONCEPTS

3.1 Meaning, definition, types of force and its application to sports activities, Centripetal and centrifugal force
3.2 Meaning, definition, types of Levers advantage of and its application to human body, Mechanical Analysis of Walking, Running, Jumping and Throwing
3.3 Newton's Laws of Motion – Meaning, definition and its application in sports activities. Aerodynamics, Effects of spin on aerial motion and Effects of spin on rebound.
3.4 Projectile – Types, Principles of Projectile, Factors and its application in sports.

Unit- IV: KINEMATICS AND KINETICS OF HUMAN MOVEMENT

4.1 Linear Kinematics – Distance and Displacement, Speed and Velocity, Acceleration and their implementation in the field of Physical Education and Sports

4.2 Angular kinematics – Angular Distance and Displacement, Angular Speed and Velocity, Angular Acceleration in the field of Physical Education and Sports

4.3 Linear Kinetics – Inertia, Mass, Momentum, Impulse, Friction and torque

4.4 Angular Kinetics – Moment of Inertia, Couple, Stability, Factors influencing the stability

References:

1. Bartlett,R.(2007).IntroductiontoSportsBiomechanics.RoutledgePublishers,USA.
2. Blazevich, A.(2007). Sports Biomechanics. A & C Black Publishers, USA.
3. Breer&Zarnicks(1979).EfficiencyofhumanmovementWIBSoundersCo.USA.
4. Hamill, J. and Knutzen, K.M.(2003).Biomechanical Basis of Human Movement. Lippincott Williams and Wilkins, USA.
5. Hay(1993).ThebiomechanicsofsportstechniquesprenticehallincNewJersey.
6. McGinnis,P.(2004).BiomechanicsofSports&Exercise.HumanKinetics,USA.
7. Oatis,C.A.(2008).Kinesiology.2nd Ed.Lippincott,Williams&Wilkins,USA.

COOCH BEHAR PANCHANAN BARMA UNIVERSITY

PANCHANAN NAGAR, VIVEKANANDA STREET, COOCH BEHAR – 736101

4 Year Under Graduate Degree (Honours) In Physical Education

Programme Objective:

1. *This course will enable students to understand the concept of test, measurement & evaluation in Physical Education.*
2. *This course will enable to describe the Criteria of selection, classification and administration of test, physical fitness tests and sports skill tests.*

Programme Outcome:

- Understand the need & importance of test, measurement and evaluation in physical develop concepts related to test, measurement
- Describe the criteria, classification and administration of test.
- Evaluation explain different physical fitness and skill tests
- Measurements method used in physical education.

Course: *Major 8th*

Paper Name: TESTS, MEASUREMENTS AND EVALUATION IN PHYSICAL EDUCATION

Paper Code: PED-MAJ 8

UNIT - I: INTRODUCTION

1.1 Meaning and definition of Test, Measurement and Evaluation.
1.2 Need and Importance of Test, Measurement and Evaluation in Physical Education and Sports
1.3 Classification of Test, Criteria for Selecting a good test
1.4 Principles of Evaluation

UNIT – II: MEASUREMENT OF BODY COMPOSITION AND SOMATOTYPE

2.1 Body Mass Index- Concept and Method of measurement.
2.2 Body Fat- Concept and Method of measurement. Relationship of body fat in reference with Physical Education and Sports
2.3 Lean Body Mass (LBM) and Body Surface Area (BSA): Concept and method of measurement,
2.4 Somatotype- Meaning, definition, types, method of Measurement and its importance

UNIT – III: FITNESS TESTS

3.1 AAHPERD Youth Physical Fitness Test
1.2 JCR test and Indiana Motor Fitness Test
3.3 Kraus Weber Minimum Muscular Fitness Test and Beep Test
3.4 Harvard Step Test and Queens College Step Test

UNIT – IV: SPORTS SKILL TESTS

4.1 Badminton- Miller Wall Volley Test and Lockhart and Mc Pherson Badminton Skill Test
4.2 Basketball- Johnson Basketball Test and Knox Basket Ball Test
4.3 Volleyball- Russel Lange Volleyball Test and Brady Volleyball Test
4.4 Football- SAI Football Skill Test and Mc Donald Soccer Test

References:

1. Authors Guide (2013) ACSM's Health Related Physical Fitness Assessment Manual, USA: ACSM Publications.
2. Collins, R.D., & Hodges P.B. (2001) A Comprehensive Guide to Sports Skills Tests and Measurement (2nd edition) Lanham: Scarecrow Press.
3. Cureton T.K. (1947) Physical Fitness Appraisal and Guidance, St. Louis: The C. Mosby Company.
4. Getchell B (1979) Physical Fitness A Way of Life, 2nd Edition New York.
5. John Wiley and Sons, Inc Jenson, Clayne R and Cynt ha, C. Hirst (1980) Measurement in Physical Education and Athletics, New York, Macmillan Publising Co. Inc.
6. Kansal D.K. (1996), "Test and Measurement in Sports and Physical Education, New Delhi: DVS Publications.
7. Krishnamurthy (2007) Evaluation in Physical Education and Sports, New Delhi; Ajay Verma Publication.
8. Vivian H. Heyward (2005) Advance Fitness Assessment and Exercise Prescription, 3rd Edition, Dallas TX: The Cooper Institute for Aerobics Research.
9. Wilmore JH and Costill DL. (2005) Physiology of Sport and Exercise: 3rd Edition. Champaigm IL: Human Kinetics.
10. Yobu, A (2010), Test, Measurement and Evaluation in Physical Education in Physical Education and Sports. New Delhi; Friends Publications

COOCH BEHAR PANCHANAN BARMA UNIVERSITY

PANCHANAN NAGAR, VIVEKANANDA STREET, COOCH BEHAR – 736101

4 Year Under Graduate Degree (Honours)
In Physical Education

Course: *Major 9th*

Paper Name: GYMNASTICS AND COMBATIVE SPORTS (Practical)
Paper Code: PED-MAJ-9

1. GYMNASTICS

- History and function of FIG and GFI
- Types of Gymnastics: Artistic Gymnastics, Rhythmic Gymnastics, Aerobic Gymnastics, Acrobatics Gymnastics, Trampoline Gymnastics.

A. Compulsory

I. Forward Roll
II. T-Balance
III. Forward Roll with Split leg
IV. Backward Roll
V. Cart-Wheel

[Note: Perform the above Gymnastic skills continuously in the same sequence]

B. Optional (Any one from each group)

a. Floor Exercise (MEN & WOMEN) (Semi- Advance Element)

I. Dive and Forward Roll
II. Hand Spring
III. Neck Spring
IV. Hand Stand and Forward Roll
V. Summersault

b. Vaulting Horse (MEN & WOMEN) (Semi Advance Element)

I. Approach run and jump from the best board
II. Astride Vault
III. Between Vault
IV. Squat vault
V. Summersault

c. Parallel Bar (MEN)

I. Mount from one bar
II. Straddle walking on parallel bars
III. Single and double step walk
IV. Perfect swing
V. Shoulder stand on one bar and roll forward
VI. Roll side
VII. Shoulder stand
VIII. Front on back vault to the side (dismount)

d. Balancing Beam (WOMEN)

I. Walking and running on the beam Leap Jump
II. Turning movement on the beam
III. Cat Jump
IV. T Balance
V. V Balance
VI. Knee Balance
VII. Forward roll
VIII. Split Sitting

2. COMBATIVE SPORTS (Any One)

i. KARATE

- Stance- Dachi: Front Stance, Horse stance, Parallel stance, Cat Stance.
- Punches-Zuki: Middle Punch, Upper Punch, Lower Punch, Side Punch.
- Block- UKE: Middle inside, Middle outer, Upper and Lower Block
- Strike-UCHI: Elbow strike, Knife hand strike, fist hammer strike.
- Leg Technique- AshiWaza, Kick- Geri: Front Kick, Round house kick, Back Kick, Round Kick.
- Self Defence: Defense against punches, Defense against Kicvks, Defense against Grabs, Defense against Head locks, Defense against Bear hugs.

i. WUSHU: BASIC SKILL

Entering Wushu world -The concept of wushu basic skills –functions of wushu skills – hand forms stances jumping skills training of kung –fu basic skills –classical kung –fu weapons –the short and long weapons in wushu

ii. TAEKWONDO

- Stance-Sogui: Attention stance, closed stance, walking stance, back L-stance, Parallel Stance, Rear foot Stance, Fighting stance.
- Hand attack: Closed hand strike-jireugi, Open hand technique-chigi.
- Kick- chagi: front kick, side kick, back kick, Roundhouse kick, Reverse side kick, hook kick, Axe kick, spin kick.
- Blocks- Makgicburat: Single fore arm block, Low block, Rising Block, Palm block, Knife hand block, Double fore arm block, Double knife hand block.
- Pattern, Poomasae, Hyung, Tul.

iii. ARCHERY

- Stance
- Nocking the Arrow
- Set
- Set-up
- Draw and Load
- Anchor
- Transfer and Hold
- Aim and Expand
- Release and Follow Through

Note: Prepare a Practical Notebook in details (History, basic rules, Skills with suitable diagram) respecting all categories.

COOCH BEHAR PANCHANAN BARMA UNIVERSITY

PANCHANAN NAGAR, VIVEKANANDA STREET, COOCH BEHAR – 736101

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4 Year Under Graduate Degree (Honours)
In Physical Education

Programme Objective:

1. *This course will enable students to understand the modern concept of sports training.*
2. *It aims to develop understanding about the aim and objective of sports training, principles of sports training, system of sports training, training components, training process, training programming and planning.*

Programme Outcome:

1. *Understand the modern concept of sports training.*
2. *It aims to describe the principles of sports training, evaluate and develop system of sports training – basic performance, intermediate performance and high performance training, plan training sessions, realize and apply the Methods of Technique Training, design different training program for Training Component, explain Periodization and its types, identify talents.*

Course: *Major 10th*
Paper Name: SCIENCE OF SPORTS TRAINING
Paper Code: PED-MAJ-10

UNIT – I: INTRODUCTION

1.1 Sports Training: Meaning, Definition, Aim and Objectives of Sports Training
1.2 Importance and Characteristics of Sports Training
1.3 Principles of Sports Training
1.4 Warm up and Cooling down- meaning, definition, types and its importance. Conditioning- Meaning, Definition and its application in Physical Education and Sports

UNIT - II: LOAD AND TRAINING LOAD

2.1 Concept definition and types of load and training load
2.2 Load Dynamics: concept, definition, components, and its principles
2.3 Over Load, Overreaching, Over Training and Burnout- Concept and Relationship with Sports Performance
2.4 Relationship between Load, Recovery and Adaptation. Conditions of Adaptation. Importance of Super Compensation

UNIT – III: DEVELOPMENT OF FITNESS COMPONENTS

3.1 Strength- Meaning, definition, types, means and method to develop Strength
3.2 Endurance- Meaning, definition, types, means and method to develop Endurance
3.3 Flexibility- Meaning, definition, types, means and method to develop Flexibility
3.4 Speed- Meaning, definition, types, means and method to develop Speed

UNIT – IV: TRAINING PLAN

4.1 Training Methods- Circuit Training, Weight Training, Interval Training, Plyometric Training
4.2 Periodisation- Meaning, definition and types of Periodisation. Phases of Periodisation,
4.3 Training Plan- Micro Cycle, Macro Cycle and Meso-Cycle. Prepare a training schedule for deferent types of Sports person
4.4 Technical and Tactical Training – meaning, Importance and methods.

References:

1. Bunn, J.N. (1998) Scientific Principles of Coaching, New Jersey Engle Wood Cliffs, Prentice Hall Inc.
2. Cart, E. Klafs &Daniel, D. Arnheim (1999) Modern Principles of Athletic Training St. Louis C. V. Mosphy Company.
3. Daniel, D. Arnheim (1991) Principles of Athletic Training, St. Luis, Mosby Year Book.
4. David R. Mottram (1996) Drugs in Sport, School of Pharmacy, Liverpool: John Moore University.
5. Gary, T. Moran (1997) – Cross Training for Sports, Canada : Human Kinetics Hardayal.
6. Singh (1991) Science of Sports Training, New Delhi, DVS Publications.
7. Jensen, C.R. & Fisher A.G. (2000) Scientific Basic of Athletic Conditioning, Philadelphia.
8. Ronald, P. Pfeiffer (1998) Concepts of Athletics Training 2nd Edition, London: Jones and Bartlett Publications.
9. Yograj Thani (2003), Sports Training, Delhi : Sports Publications

COOCH BEHAR PANCHANAN BARMA UNIVERSITY

PANCHANAN NAGAR, VIVEKANANDA STREET, COOCH BEHAR – 736101

4 Year Under Graduate Degree (Honours)
In Physical Education

Programme Objective:

1. *Understand the meaning, definition, scope, aim and objective of Sports Medicine.*
2. *Understand the Classification of Injuries, causes and prevention of sports injuries*
3. *To build up concepts of Physiotherapy and Therapeutic Exercises, Modalities and Doping in Sports.*

Programme Outcome:

1. *Demonstrate sufficient understanding of knowledge in Physiotherapy and Sports Medicine.*
2. *Understand the Classification of Injuries, causes and prevention of sports injuries*
3. *Able to integrate theoretical knowledge with clinical assessment of Physiotherapy, Therapeutic Exercises, Modalities and concepts of Doping in Sports.*

Course: *Major 11th*
Paper Name: SPORTS MEDICINE AND PHYSIOTHERAPY
Paper Code: PED-MAJ 11

UNIT - I: INTRODUCTION TO SPORTS MEDICINE

1.1 Meaning, Definition, aim and objectives of Sports Medicine
1.2 History of Sports Medicine in India and Abroad
1.3 Nature & Scope of Sports Medicine
1.4 Need and Importance of Sports Medicine

UNIT – II: SPORTS INJURIES AND MANAGEMENT

2.1 First Aid- Meaning, importance, principles and Golden Rules, Bandages and its type
2.2 Classification of Injuries, causes and prevention of sports injuries. Health Hazards in Physical Education & Sports
2.3 Management of Skin and Muscles Injuries (Blisters, Corns, Abrasions, Bruises, Burns, Avulsion, Cuts Lacerations, Muscles Strain and Ruptures)
2.4 Management of Tendon, Ligament, Cartilage and Bone Injuries

UNIT-III: INTRODUCTION TO PHYSIOTHERAPY AND THERAPEUTIC EXERCISES AND MODALITIES

3.1 Meaning, definition and Importance of Physiotherapy and Therapeutic Exercises. Types of Therapeutic Exercises
3.2 Meaning, definition and types of Massage, principle and contraindication of Massage
3.3 Hydrotherapy (Hot and Cold Packs, Whirlpool, Contrast bath), Thermotherapy, Cryotherapy
3.4 Electrotherapy (Infrared Rays, Ultraviolet rays, Short Wave Diathermy, Ultrasound and Tens Therapy)

UNIT - IV: DOPING IN SPORTS

4.1 Doping- History, Definition, Classification, Testing Procedure and their effect on Health and Sports Performance.
4.2 National and International Anti-doping organization and their role
4.3 Classification and types of drugs banned by WADA and NADA, Side effects of drugs
4.4 Ergogenic aids in Sports, Blood doping, Types of Blood Doping, Carbohydrate Loading

References:

1. Armstrong and Tucker, Injuries in sports (London: Staples press, 1964).
2. Christine, M. D., (1999). Physiology of sports and exercise. USA: Human Kinetics.
3. Conley, M. (2000).Bioenergetics of exercise training. In T.R. Baechle, & R.W. Earle, (Eds.),
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COOCH BEHAR PANCHANAN BARMA UNIVERSITY

PANCHANAN NAGAR, VIVEKANANDA STREET, COOCH BEHAR – 736101

4 Year Under Graduate Degree (Honours)
In Physical Education

Programme Objective:

1. Students may understand the Game Specialization
2. Students may learn the officiating and coaching of the Game

Programme Outcome:

1. To train the student teachers to equip with game specialization of any discipline mentioned above so as to enhance their teaching ability and proficiency in handling practical classes.
2. To develop a knowledge about the historical development of this game.

Course: *Major 12th*
Paper Name: GAME SPECIALIZATION (Practical)
Paper Code: PED-MAJ-12

1. GAMES SPECIALIZATION:

Kabaddi, Kho-Kho, Football, Volleyball, Handball, Netball, Badminton, Table Tennis, Cricket, Hockey, Throwball, Basketball, Softball and Baseball (Any One to be opted).

A. Introduction of the game and historical development with special reference to India. Important tournaments held at National and International levels and distinguished personalities related to the game.
B. All Details of layout of the opted game specialization

C. Teaching and Coaching Fundamental skills of opted game specialization.

D. Rules and their interpretation and duties of the officials of the concern game.

E. 4 internal lessons practicing at College or any Local School and 1 final lesson on the students of practicing at College as a games specialization in any discipline mentioned above in presence of External Examiners.

Note: Content of Practical Notebook

1. History
2. Dimension of the game
3. Rules and regulation of the Sports and Games.
4. Description of skills with diagram
5. Indian performance respecting Sports and Games.