



भारतीय प्रौद्योगिकी संस्थान खड़गपुर

Indian Institute of Technology Kharagpur

Extra Academics Activity *Syllabus for Semester 2 (Spring)*

1. National Cultural Appreciation (NCA-2) **(PRE-REQUISITE: NCA-1)**

DOMAIN-1 INDIAN DANCE

Introduction to the folk dances of India; Introduction to abhinaya; Introduction to angalakshana with shirobheda, grivabheda, drishtibheda, bhrubheda; Therapeutic effects of dance; Training on nritya aspect of Kathak set to Teentaal – including performance of aamad, thaat, and rangmanchkatukra in slow pace (vilambitlaya), mathematical variations of bol (chakradhaar) in medium and fast pace (Madhya and drutlaya), and footwork (gintitihayi, ladi); Training on nritya items like kavitta, vandana, and bhajan; Training on one Indian folk dance style.

DOMAIN-2 INDIAN INSTRUMENTAL MUSIC

Recognition of 12 notes (7 Shuddha and 5 VikritSwar). Play them on your Instrument and try to sing the notes; Learn to play different combinations and develop Paltas in different rhythm (5,6,7,8). Learn to play Meend; Knowledge of the following scales: Khamaj, Kafi; Learn one Gat (Instrumental composition) from any of the given scales. Also, try to sing the composition; Knowledge about combinations of multiple syllables of Tabla; Knowledge about the following Taals and recite their basic Theka with proper poetry, pronunciation and proper Tali-Khali: Rupak, Jhaaptaal, Deepchandi, Choutaal; Learn to recite the Dwigun (Double) of a Taal;

DOMAIN-3 INDIAN VOCAL MUSIC

Recognition of 12 notes (Shudh and vikrit); Advanced paltas, in any given scales or any combination of shudh and Vikritswars (3,4,5, and 6 chhand). (Shamapadi - 3,4, and 6 chhand. Bishamapadi - 5 and 7 chhand); 12345, 23451, 34512, 45123, 51234, 123456, 234561, 345612, 456123, 561234, 612345; Concept of Major and Minor Scales; Knowledge of the 3 scales (2 covered in the previous semester). At least should know which are the swars used in each of the scales: Bhairon, Bhairavi, Kaafi; 1 bandish from any of the given scales, with Swar/Sur; A few sapaats of the raag of the bandish learnt; Knowledge of combination of multiple syllables in table; Knowledge of 4 taals, ability to recite them with correct music and pronunciation (along with the 3 covered in the previous semester): Rupak, Teora, Ektaal, Jhaaptaal; Ability to recognise the sound and the formation of the following instruments: Tabla, Pakhawaj, Mridangam, Khol, Ghattam

DOMAIN-4 INDIAN FINE ARTS

Theory: Historical background and analysis on Ancient Indian art; Development of Buddha image in India; Development of Stupa Architecture in India; Indian traditional sculpture; Mural Tradition of India; Indian Traditional Temple Architecture : Nagara, Vesara, Dravida; Tribal and Folk art of India;

Practical: Architectural drawings; Study of Buddha image in drawings; Wash Painting; Techniques of Folk and Tribal Art of India.

Materials required for practical class: Chat paper/Art paper; Pencil/ Eraser/ Sketch Pen/ Black Permanent Marker Pen; Artist quality watercolor set; Poster color set; Round brush (No. : 0, 2, 4, 6, 8, 12) (Sable hair); Flat brush (1/2 inch, 2 inches) (Sable Hair); Office gum; Fevicol.

2. National Cadet Corps (NCC)

NCC, AW

Serial No.	Broad topic	Topic Code	Sub topics	
1	National Integration & Awareness	NI	Problems / Challenges of National Integration Unity in Diversity National Integration Images/ Slogans for National Integration Contribution of Youth in National Building	
2	Foot Drills	FD	Marching, length of pace and time of marching in quick time and halt, slow march and halt Side pace, pace forward and to the rear Turning on the march and wheeling Saluting on the march Marking time, forward march and halt in quick time Changing step Formation of squad and squad drill	

3	Drill with Arms	AD	Gen Salute, Salami Shastra Squad drill Short/long trail from the order and vice-versa Examine arms	
4	Ceremonial Drill	CD	Guard of Honour Platoon/Coy Drill	
5	Weapon Training	WT	Stripping, assembling, care and cleaning and sight setting of .22 rifle Stripping, assembling, care & cleaning of 7.62mm SLR Trigger control and firing a shot Range procedure and safety precautions Theory of group and snap shooting Short range firing, Aiming II alteration of sight	
6	Personality Development and Leadership	P	Type of Leadership Attitude – Assertiveness & Negotiation Time Management Effects of Leadership with historical examples Stress Management Skills Interview Skills Conflict Motives – Resolution Importance of Group / Team Work Influencing Skills Body Language Sociability : Social Skill Value / Code of Ethics	
7	Disaster Management	DM	Traffic control during Disaster under Police Supervision	

			<p>Essential Service & their maintenance</p> <p>Assistance during Nature / Other Calamities: Flood / Cyclone / Earth Quake / Accident etc.</p> <p>Setting up of relief camp during DM</p> <p>Collection of Aid material</p>	
8	Social Awareness & Community Development	SA	<p>Contribution of Youth towards social welfare</p> <p>Family Planning</p> <p>Drug Abuse & Trafficking</p> <p>Civil Responsibilities</p> <p>Cause & Prevention of HIV / AIDS; Role of youth</p> <p>Counter Terrorism</p> <p>Corruption</p> <p>Social Evils viz Dowry / Female Foeticide / Child abuse & trafficking etc</p> <p>RTI & RTE</p> <p>Traffic Control Org & Anti-drunk driving</p> <p>Provision of Protection of Children from Sexual Harassment Act 2012</p>	
9	Health & Hygiene	H	<p>Basic of Home Nursing & First-Aid in common</p> <p>Wounds & Fractures</p> <p>Introduction Yoga & Exercises</p> <p>Physical & Mental Health</p>	
10	Adventure Training	ADV	<p>Slithering</p> <p>Rock Climbing</p> <p>Cycling / Trekking</p>	
11	Environment Awareness and Conservation	E	<p>Water Conservation for Rainwater harvesting</p> <p>Waste Management</p> <p>Pollution Control; Water, Air, Noise & Soil</p>	

12	Obstacle Training	OT	Obstacle Course	
13	General Service Knowledge	GSK	Badges & Ranks	
			Task & Role of Different types of Aircrafts	
			Modes of Entry to Air Force	
14	Principle of Flight	PF	Principle of Flight	
15	Airmanship	AR	Visit to Airfield	
			Air Traffic Control Rules	
16	Aero Engines & Airframes	AF	Types of Engines	
17	Flight Instrument	FI	Cockpit Instruments Basic	

NCC, EME

Serial No.	Broad topic	Topic Code	Sub topics	
1	National Integration & Awareness	NI	Problems / Challenges of National Integration Unity in Diversity National Integration Images/ Slogans for National Integration Contribution of Youth in National Building	
2	Foot Drills	FD	Marching, length of pace and time of marching in quick time and halt, slow march and halt Side pace, pace forward and to the rear Turning on the march and wheeling Saluting on the march Marking time, forward march and halt in quick time Changing step Formation of squad and squad drill	
3	Drill with Arms	AD	Gen Salute, Salami Shastra	

			<p>Squad drill</p> <p>Short/long trail from the order and vice-versa</p> <p>Examine arms</p>	
4	Ceremonial Drill	CD	<p>Guard of Honour</p> <p>Platoon/Coy Drill</p>	
5	Weapon Training	WT	<p>Stripping, assembling, care and cleaning and sight setting of .22 rifle</p> <p>Stripping, assembling, care & cleaning of 7.62mm SLR</p> <p>Trigger control and firing a shot</p> <p>Range procedure and safety precautions</p> <p>Theory of group and snap shooting</p> <p>Short range firing, Aiming II alteration of sight</p>	
6	Personality Development and Leadership	P	<p>Type of Leadership</p> <p>Attitude – Assertiveness & Negotiation</p> <p>Time Management</p> <p>Effects of Leadership with historical examples</p> <p>Stress Management Skills</p> <p>Interview Skills</p> <p>Conflict Motives – Resolution</p> <p>Importance of Group / Team Work</p> <p>Influencing Skills</p> <p>Body Language</p> <p>Sociability : Social Skill</p> <p>Value / Code of Ethics</p>	
7	Disaster Management	DM	<p>Traffic control during Disaster under Police Supervision</p> <p>Essential Service & their maintenance</p> <p>Assistance during Nature / Other Calamities: Flood /</p>	

			<p>Cyclone / Earth Quake / Accident etc.</p> <p>Setting up of relief camp during DM</p> <p>Collection of Aid material</p>	
8	Social Awareness & Community Development	SA	<p>Contribution of Youth towards social welfare</p> <p>Family Planning</p> <p>Drug Abuse & Trafficking</p> <p>Civil Responsibilities</p> <p>Cause & Prevention of HIV / AIDS; Role of youth</p> <p>Counter Terrorism</p> <p>Corruption</p> <p>Social Evils viz Dowry / Female Foeticide / Child abuse & trafficking etc</p> <p>RTI & RTE</p> <p>Traffic Control Org & Anti-drunk driving</p> <p>Provision of Protection of Children from Sexual Harassment Act 2012</p>	
9	Health & Hygiene	H	<p>Basic of Home Nursing & First-Aid in common</p> <p>Wounds & Fractures</p> <p>Introduction Yoga & Exercises</p> <p>Physical & Mental Health</p>	
10	Adventure Training	ADV	<p>Slithering</p> <p>Rock Climbing</p> <p>Cycling / Trekking</p>	
11	Environment Awareness and Conservation	E	<p>Water Conservation for Rainwater harvesting</p> <p>Waste Management</p> <p>Pollution Control; Water, Air, Noise & Soil</p>	
12	Obstacle Training	OT	Obstacle Course	
13	Armed Forces	AF	<p>Badges & Ranks</p> <p>Task & Role of Fighting Arms</p>	

			Task & Role of Supporting Arms & Service Modes of Entry to Army	
14	Map Reading	MR	Relief, Contours & Gradients Cardinal points & Types of North Types of bearing & use of Service Protractor Prismatic Compass and its use & GPS	
15	Field Craft & Battle Craft	FC & BC	Observation, Camouflage & Concealment Field Signals Section Formation Fire Control Orders	
16	Infantry Weapons & Equipment	INF	Characteristics of Infantry : Company Support Weapons Characteristics of Infantry: Battalion Support Weapons	
17	Military History	MH	Indian Army war heroes PVCs War Movies	
18	Communication	C	Characteristics of Walkie / Talkie Basic RT Procedure Latest trends & development (Multi Media, Video Conferencing, IT)	

3. National Service Scheme (NSS)

Categories	Topics
Lectures (12 hours)	Waste Management and Environmental issues Waste to resource Management-Circular economy approach Plastic waste-how to handle this crisis E-waste-Why we should be worried and how to manage it Basic life support training CPR training, First AID training

	Disaster Management
Field Works in Village (24 hours)	

4. Health & Fitness

3 hours per week.

Course Orientation	Introduction of the course <ul style="list-style-type: none"> • Warm-Up • Main part (aerobics, flexibility, balance) • Limbering Down
General Fitness	Endurance: Strength Endurance Flexibility: Dynamic Stretching Strength: Speed strength Speed: Speed Endurance Agility: Reflexes Agility Coordination: Synchronize All body part, Reaction Time
Recreation & On Field Management	Minor Games & First Aid
Special Lectures/Activity	<ul style="list-style-type: none"> ❖ Health and Fitness Awareness Rally ❖ Mental health / Happiness / Stress Management ❖ Nutrition for Health and Fitness ❖ Tools and Measures of Health and Fitness ❖ General awareness about International and National sporting events

5. NSO (Sports and Games)

Course Objective :

1. Demonstrate understanding of health principles incorporating a wide variety of aspects from forms of exercise to achieving optimum level of wellness.
2. Demonstrate understanding of self-responsibility for personal health and wellness.

- Understand implications of personal and societal behavior on leading a healthy lifestyle with injury and disease prevention.

Course Outcome:-

- Students will use basic principles of physical activities for health and wellness to develop an informed, personal approach to mental and physical health.
- Students will acquire knowledge and demonstrate skills to safely engage in physical activity.
- Students will understand the principles of lifetime fitness and will incorporate fitness activities into a healthy and active lifestyle.

Scheme of Evaluation			
Continuous Assessment (03 in one Semester)			
S. No.	Components	Description of Components	Weight age (%)
1	Written test	Subjective / Objective types Question	20
2	Fitness assessment	Fitness related assessment through various fitness test batteries for specific event	30
3	Sports Skills Assessment	Administration of 3 Standardized (r =.60 or above) Skills Tests (20 Marks for each Test)	50

Note: The mean of obtained score will be considered for Grading (Marks obtained out of 300)

7 Scale Grading System			
Grades	Points for Credit	Performance	Marks Range (m)
EX	10	Excellent	90-100
A	9	Very Good	80-89
B	8	Good	70-79
C	7	Fair	60-69
D	6	Average	50-59
P	5	Pass	40-49
F	0	Fail	Less than 40

Subjects :- Athletics, Badminton, Basketball, Cricket, Football, Hockey, Squash, Swimming, Tennis, Table Tennis, Volleyball, Weightlifting, Yoga

Sports: -Athletics

Sl.No	COURSE CONTENT	P.No.
1	Unit-III Athletic Fundamentals	1-12
	Hurdles and Long Jump. Introduction and Brief history. Characteristics required for specific events in Athletics /for the Athletes. Technique, Errors, Reasons for errors and corrections.	13-24
2	Unit-IV Athletic Fundamentals-	
	High Jump, Discus Throw and Relays Introduction and Brief history; Characteristics required for specific events in Athletics /for the Athletes. Technique, Errors, Reasons for errors and corrections.	25-30
3	Evaluation	31-36

Reference books and manual for Athletics Specialization (Athletics 1st year and Athletics 2nd years)

- Arthur E. Ellison (ed) (1994). Athletic Training and Sports Medicine.
- Ballisteros, J.M. (1998). Hurdles Basic Coaching Manual, IAAF.
- Bosen K.O. (1993). Teaching Athletics Skills and Technique.
- Martin, David E. Peter N. Coe (1991). Training Distance Runner.
- S.Howard (1981). Science of Track and Field Athletics.
- Briggs Graeme (1987). "Track and field coaching Manual", Australian Track and Field Coaches Association. Rothmans Foundation National Sports Division.
- I.A.A.F. Level-II (2001). Text Book on Jumping Event.
- Jarver, Jesse (1987). "The Jumps", Track and Field Coaching Manual Australia.

Sports: -*Badminton*

Sl.No	COURSE CONTENT	P.No.
1	General Fitness (All Motor Ability). Speed , Strength, Flexibility, Agility,Co ordination	1-3
2	Specific Fitness (Game Related Skills) -Racket & Ball Exercise, Motor Fitness, General Motor Fitness	4-6
3	Drop Shot with Recovery Forehand/Backhand -Stationary Position With Shuttlecock	7-9
4	Alternate Forehand/Backhand net shot -Stationary Position, with Shuttlecock	10-12
5	Recreational Activity -Related to the Fitness	13-15
6	Alternate Forehand/Backhand Lift -Stationary Position ,With Shuttlecock	16-18
7	Aim & Objective of Sports/ Planning In Sports - Improvement of physical fitness, Acquisition of sports skills, Improvement of tactical efficiency,Improvement of mental abilities	19-21
8	Forehand Smash with Recovery ,Stationary Position with Shuttlecock	22-24
9	Recreational Activity -Related to the skills	25-27
10	Forehand/backhand serve with follow up -Stationary Position ,With Shuttlecock	28-30
11	Drop and net forehand/backhand ,Stationary Position ,With Shuttlecock	31-33
12	Evaluation	34-36

Sports: - *BASKETBALL*

Sl.No	COURSE CONTENT	P.No.
1	Introduction /Course orientation	1-3
2	Ball handling, Dribbling technique , Foot work : Pivot foot , Shooting Layup technique, Defensive Rebounding technique	4-6
3	Ball handling, Progressive Passing technique and drill, Progressive Dribbling progressive technique and drill , Shooting Lay -up technique and drill, Defensive Rebounding technique	7-9
4	Board tap with Basketball, Passing Drill : 2 man ,3 man , 4 man ,5 man , Dribbling progressive technique variation , Shooting Layup drill,	10-12

5	Ball handling, Drill :2 man progressive passing ,3 man progressive passing, 4 man progressive Passing,5 man progressive passing ,Dribbling progressive drill ,Shooting Layup drill, Half court group Game (2-2,3-3)	13-15
6	Board tap with Basketball , Progressive Passing drill, Dribbling variation , Shooting Lay up, Pivot foot technique, Half court Game 2 on 2, 3 on 3, 4 on 4	16-18
7	Evaluation	19-21
8	Ball handling,Board tap with Basketball , Progressive Passing drill, Dribbling variation , Shooting Lay up, Pivot foot practice, Offensive Rebounding, Half court Game 2 on 2, 3 on 3, 4 on 4	22-24
9	Full court Board tap with Basketball, Dribbling & Passing drill , Shooting Lay up drill ,Pivot foot practice, Offensive Rebounding Half court Game 2 on 2, 3 on 3, 4 on 4	25-27
10	Full court Board tap with Basketball, Dribbling & Passing drill , Shooting Lay up drill , Offensive Rebounding, Full court Game	28-30
11	Board tap with Basketball, Dribbling & Passing drill , Shooting Lay up drill , Offensive Rebounding, Full court Game	31-33
12	Evaluation	34-36

Reference Books :

- 1) Books: Coaching “Basketball “ John Wooden, Daily Practice
- 2)Basketball Drills, Plays, and Strategies by Clinton M. Adkins, Steven R. Bain, Edward A Dreyer,
- 3) Coaching Basketball by Jerry Krause
- 4)The Journal of Basketball Coaches Association of India by NSNIS SAI ,Patiala
- 5) Coaching Youth Basketball by John P. McCarthy,JR
- 6) Brain and Brawn Basketball by Joe Lipa

Sports: - Cricket

Sl.No	COURSE CONTENT	P.No.
1	INTRODUCTION	1-3
2	Backfoot Defence Body alignment, Bat Position	4-6
3	Backfoot Drive Front Foot Drive, Body alignment, Bat Position, Bat swing, Follow through	7-9
4	Fielding And Wicket Keeping, Body alignment ,Body Posture	10-12
5	Bowling In Swing And Out Swing- Grip, Running , Back foot landing, Loading , Follow through	13-15
6	Physical Fitness	16-18
7	Backfoot Defence Body alignment, Bat Position	19-21
8	Backfoot Drive Front Foot Drive, Body alignment, Bat Position, Bat swing, Follow through	22-24
9	Fielding And Wicket Keeping, Body alignment ,Body Posture	25-27
10	Bowling In Swing And Out Swing- Grip, Running , Back foot landing, Loading , Follow through	28-30
11	Physical Fitness Speed , Strength, Flexibility, Agility,Co ordination	31-33
12	Evaluation	34-36

Sports: - Football

SLNo	COURSE CONTENT	P.No.
1	Introduction / Course Orientation	1-3
2	Conditioning (Motor Fitness) General ,Development of endurance ,Speed ,strength ,agility,(Explosive Bodyweight Agility)	4-6
3	Conditioning (Motor Fitness) Specific, Development of endurance ,Speed ,strength ,agility, Learning of juggling-head, Thigh, instep	7-9
4	Feints & Fakes with Ball Side Kick Behind, Slap Step over, Scissors, Scissors Drag, Step Over, Slap Sidekick Behind, Side Step, Double Sidestep, Drag Push, Drag Scissors	10-12
5	G.K ball Handling Rolling the ball on the body, Circle the ball around the body, Ball around the legs, Circle ball around the leg, Figure 8 in floor, Figure 8 around legs in air, Catch ball between legs, Between legs catching both hands in front & then back, Roll Down & Catch, Throw overhead & catch behind back., Throw overhead & catch behind back & throw back over, Wide arm swing, Figure of 8 in front of body	13-15
6	Evaluation	16-18
7	G.K ball Handling Throw the ball from hand to hand, across the body, 2 ball juggling, 2 ball juggling alternating hands , Throw- clap- catch , One handed swing, Throw 2 hand punch & catch, Throw 1 handed punch & catch, Alternating hand punch & catch, Bouncing ball on top of another, Balancing ball on top of another, Bounce & catch with 1 hand, Alternate hand throw & grab	19-21
8	(Improving 1st Touch On Ball) Pull Spin Turn, step Over Turn, Inside Chop Turn, Inside Touch Turn Sole Stop, Turn Open Inside Touch, Turn Open Outside Touch, Inside Stop, Step On Pull Turn, Shuffle Turn	22-24
9	Heading Throw& Catch overhead, Throw High & Catch Overhead, Throw Head & catch, Throw Head Higher Than Throw, 5 Head Juggle & Catch	25-27
10	Mastery of ball in game situation Passing- Right Foot One Touch, Left Foot One Touch, Right Foot Two Touch, Left Foot Two Touch, Inside Outside Inside, Two Touch Inside Across Cone, Two Touch Outside Across Cone, 2 Touch Open Up Push Ball Across cone	28-30
11	(Passing & Receiving) game situation Two Touch Passing, One Touch Passing, Sole Receiving & Passing, Sole Roll & Passing, Open Body Touch, Across Body Touch, Outside Body Touch, Cruft Touch, Inside Turn, Outside Turn	31-33
12	Evaluation	34-36

Book Reference-

1. FIFA coaching Manual
2. Small sided game and integrating physical preparation-FIFA
3. Power Training in football- Jan's bangs Bo
- 4.Soccer Skills: The Essential Guide to Technique, Training, and Tacticsby Clive Gifford

Sports: -Hockey

SLNo	COURSE CONTENT	P.No.
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1	General Fitness (All Motor Ability), Speed , Strength, Flexibility, Agility , Co ordination	1-3
2	Specific Fitness (Game Related Skills) , Stick & Ball Exercise, Motor Fitness , General Motor Fitness	4-6
3	Receiving, Stationary Position, With Ball	7-9
4	Receiving the Ball Both Side Stationary Position, With Ball	10-12
5	Hit, Stationary Position, With Ball	13-15
6	Slap Shot Stationary Position, With Ball Slap Shot on the Ground	16-18
7	Aim & Objective of Sports/ Planning In Sports Improvement of physical fitness,Acquisition of sports skills,Improvement of tactical efficiency,Improvement of mental abilities	19-21
8	Tackle , Jab Tackle Stationary Position, With Ball	22-24
9	Block Tackle , Stationary Position, With Ball	25-27
10	Side Tackle , Stationary Position, With Ball	28-30
11	Test & Measurement In sports , General Motor Fitness Test	31-33
12	Evaluation	34-36

Sports: - Lawn Tennis

Sl.No	COURSE CONTENT	P.No.
1	General Fitness (All Motor Ability). Speed , Strength, Flexibility, Agility, Co ordination	1-3
2	Specific Fitness (Game Related Skills)- Mini Court rally Exercise using ground strokes, Motor Fitness, General Motor Fitness	4-6
3	Introduction/Demonstration of Basic Serve	7-9
4	Basic serve practice by Students including shadow practice	10-12
5	Basic Serve practice using ball – By students	13-15
6	Forehand Rally using Basic Serve – Cross Court	16-18
7	Aim & Objective of Sports/ Planning In Sports - Improvement of physical fitness, Acquisition of sports skills, Improvement of tactical efficiency, Improvement of mental fitness	19-21
8	Backhand rally using basic Serve - Cross Court	22-24
9	Fun Game Activity- 7 points Tie – break (Singles & Doubles)	25-27
10	Serve and Return of Serve – Practice by students	28-30
11	Serve and rushing to the net – Introduction of Volley (stance, Grip & Body position)	31-33
12	Evaluation	34-36

Sports: - Squash

Sl.No	COURSE CONTENT	P.No.
1	General Fitness (All Motor Ability), Speed ,0 Strength, Flexibility,	1-3

	Agility Co ordination	
2	Specific Fitness (Game Related Skills) ,Racket & Ball Exercise , Motor Fitness General Motor Fitness	4-6
3	Forehand & Backhand Drive , Stationary Position, With Ball	7-9
4	Forehand & Backhand Drop , Stationary Position, With Ball	10-12
5	Forehand Drop & Forehand Drive , Stationary Position, With Ball	13-15
6	Backhand Drop & Backhand Drive , Stationary Position, With Ball	16-18
7	Recreational Activity Related to the fitness	19-21
8	Aim & Objective of Sports/ Planning In Sports	22-24
9	Match Practice	25-27
10	Forehand Cross , Stationary Position, With Ball	28-30
11	Backhand Cross , Stationary Position, With Ball	31-33
12	Evaluation	34-36

Sports: - Swimming

SL No	BROAD TOPICS	Hour
1	Dry land conditioning on Swimming related physical fitness	1-3
2	Development of cardio-vascular endurance	4-6
3	Development of muscular strength endurance	7-9
4	Development of flexibility endurance and co-ordination	10-12
5	Basic technique of the Back Crawl stroke.	13-15
6	Progressing through floating, kicking, pulling, and breathing.	16-18
7	Coordinating the arm action with kick and breathing technique.	19-21
8	Advance technique of the Back Crawl stroke.	22-24
9	Stroke Drill, Starting technique of the Back Crawl stroke.	25-27
10	Turning technique of the Back Crawl stroke.	28-30
11	Finishing technique of the Back Crawl stroke.	31-33
12	Evaluation	34-36

<https://www.fina.org/swimming/rules>

The Complete Book Swimming by Dr. James E. Counsilman

Sports: - Table Tennis

SL No	BROAD TOPICS	Hour
1	General Fitness (All Motor Ability), Speed ,0 Strength, Flexibility, Agility Co ordination	1-3
2	Specific Fitness (Game Related Skills) ,Racket & Ball Exercise , Motor Fitness General Motor Fitness	4-6

3	Forehand & Backhand Push Stationary Position,With Ball	7-9
4	Forehand & Backhand Drop Stationary Position,With Ball	10-12
5	Forehand Drop & Forehand Push Stationary Position,With Ball	13-15
6	Backhand Drop & Backhand Push Stationary Position,With Ball	16-18
7	Recreational Activity Related to the Fitness	19-21
8	Aim & Objective of Sports/ Planning In Sports Improvement of physical fitness, Acquisition of sports skills.Improvement of tactical efficiency Improvement of mental abilities	22-24
9	Match Practice :- Push (Full Table)	25-27
10	Counter :- Forehand Counter ,Stationary Position,With Ball	28-30
11	Counter :- Backhand Counter ,Stationary Position,With Ball	31-33
12	Evaluation	34-36

Sports: - Volleyball

SL No	BROAD TOPICS	Hour
1	General Fitness (All Motor Ability), Speed ,0 Strength, Flexibility, Agility Co ordination	1-3
2	Specific Fitness (Game Related Skills) ,Racket & Ball Exercise , Motor Fitness General Motor Fitness	4-6
3	Dig Pass With Ball Stationary Position,With Ball	7-9
4	Shadow Practice Overhand Pass Stationary Position,With Ball	10-12
5	Overhand Pass With Ball Stationary Position,With Ball	13-15
6	Setter Training Without Ball Stationary Position,With Ball	16-18
7	Aim & Objective of Sports/ Planning In Sports Improvement of physical fitness Acquisition of sports skills, Improvement of tactical efficiency,Improvement of mental abilities	19-21
8	Setter Training With Ball Stationary Position,With Ball	22-24
9	Match Practice	25-27
10	Block Training with Ball & Without Ball , Stationary Position,With Ball	28-30
11	Spike training with Ball & without ball , Stationary Position,With Ball	31-33
12	Evaluation	34-36

Sports: - Weightlifting

S N	Course Content	P No
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1	<p>Course Orientation: Brief introduction to the discipline Basic rules & Regulations, Dietary Requirement, Energy Balance, Nutrition and Balance Diet, Safety Measures, Self evaluation Techniques.</p> <ul style="list-style-type: none"> • Curriculum & Mode of Conduct of classes. • Evaluation/Grading Techniques. • Pattern of Warming Up (General & Specific) and Limbering Down • Pre Evaluation For Talent Identification and Segregation 	1-2
2	<p>Warming Up & Limbering Down: General Warm Up & its Benefits: Low intensity Cardio & Neuromuscular Activation exercise: Jogging and Basic Stretches (Calf to Neck Stretches, Rotation Exercises, Spot jogging/High Knee Action, Stair Step jump, Jumping Jacks and their Variations) Specific Warm Up & its Benefits: Specific Muscle Activation Exercise, Joint Mobility Exercise. Limbering Down & its Benefits: Static, Dynamic</p>	3-4
3	<p>Safety, Risk Management and Injury Prevention: Trainers' Right & Responsibilities, Athletes' Right & Responsibilities, Pre-evaluation, Warming-up & limbering Down, Balance Diet and Nutrition.</p>	5-6
4	<p>Rules and their interpretations: Equipments, Layout of Platform and Arena with all its specifications.</p>	7
5	<p>Preparatory Exercises (Conditioning): Conditioning (Full Body): Very Low Intensity (30% to 40%) Resistance Training exercises, Load @ 30% of 1 RM (Set of 12 Exercises, 1 Set each, 8 Reps for Small Group of Muscles, 10 Reps for Big Group of Muscles with 60 Second rest between two sets), Monthly Increase in Load @ 5% till 45%, Administration of Critical Load @ 2 Times a month. (Sequence of exercises: Leg Press, Lying Leg Curl, Seated Cable Curl, Flat Bench Press, Dumbbell Press, Dumbbell Shrug, Triceps Pushdown, Barbell Curl, Back Extension, Standing Calf Raise, Barbell Wrist Curl & Crunches) Conditioning (Upper Body) Low Intensity (40% to 50%) Resistance Training exercises, Load @ 40% of 1 RM (Set of 10 Exercises, 2 Sets each and 1 Set at select cases, 08 Reps for Small Group of Muscles, 10 Reps for Big Group of Muscles with 90 Second rest between two sets) Monthly Increase in Load @ 5% till 55%, Administration of Critical Load @ 2 Times a month. (Sequence of exercises: Flat Dumbbell Press, Pec Deck Fly, Single Arm Dumbbell Row, Seated Cable Row, Seated Dumbbell Press, Dumbbell Lateral Raise, Dumbbell Shrug, Triceps Push Down, Barbell Curl, Barbell Wrist Curl) Conditioning (Lower Body) Low Intensity (40% to 50%) Resistance Training exercises, Load @ 40% of 1 RM (Set of 7 Exercises, 2 Sets each and 1 Set at select cases, 15 Reps for Small Group of Muscles, 20 Reps for Big Group of Muscles with 90 Second rest between two sets) Monthly Increase in Load @ 5% till 55%, Administration of Critical Load @ 2 Times a month. (Sequence of exercises: Smith Machine Squats, Leg Extension, Lying Leg Curl, Back Extension, Standing Calf Raise with Resistance, Crunches, Reverse Crunch)</p>	8-15
6	<p>Workout Plans: Techniques Involved & their relation with Muscles and Joints, Muscle Energy Technique (MET), Fundamental Principles Involved in Exercise Selection and Execution of Training, Basic Periodization of Training.</p>	16-17
7	<p>Foundation Skills/Moves: Core & Auxiliary Exercises: Shadow Practice, Basic Barbell Training.</p>	18-21
8	<p>Fundamental Skills: Snatch: Stance (Jump, Landing, Stance Drills), Grip (Hook grip), Position (Barbell Position Overhead, Active Shoulders) Fundamental Skill Execution without weight. Clean & Jerk: Stance, Grip and Position. Fundamental Skill Execution without weight.</p>	22-31

9	Bench Coaching & Control of Sports Training: Systematic approach, distribution of training loads in relation to training/competition goals & defined structure for progress.	32-33
10	Self Evaluation Techniques: Motor Fitness Test: (Strength Endurance, Maximal Strength, Cardio Vascular Endurance) Psychological Tests: (Motivation) Performance Test: Snatch, Clean & Jerk	34-36

Discipline : - Yoga

SL No	BROAD TOPICS	Hour
1	Kumbhakasana - Procedure, benefits , dos and don'ts, practical Pādahastāsana - Procedure, benefits , dos and don'ts, practical	1-3
2	Trikoṇāsana - Procedure, benefits , dos and don'ts, practical Balasana - Procedure, benefits , dos and don'ts, practical	4-6
3	Bhekasana - Procedure, benefits , dos and don'ts, practical Baddhakonāsana - Procedure, benefits , dos and don'ts, practical	7-9
4	Janusirsasana - Procedure, benefits , dos and don'ts, practical Matsyāsana (fish) - Procedure, benefits , dos and don'ts, practical	10-12
5	Dhanurāsana (bow) Procedure, benefits , dos and don'ts, practical Anjaneyasana Procedure, benefits , dos and don'ts, practical	13-15
6	Shashankasana Procedure, benefits , dos and don'ts, practical -UttanaShishoasana- Procedure, benefits , dos and don'ts, practical	16-18
7	Cow pose & cat pose (bitilasana, Marjariasana) - Procedure, benefits , dos and don'ts, practical Bhujaṅgāsana – cobra - Procedure, benefits , dos and don'ts, practical	19-21
8	Navasana - Procedure, benefits , dos and don'ts, practical Ustrasana - Procedure, benefits , dos and don'ts, practical	22-24
9	Vasisthansana - Procedure, benefits , dos and don'ts, practical Mandukasana - Procedure, benefits , dos and don'ts, practical	25-27
10	Vriksasana - Procedure, benefits , dos and don'ts, practical Bridge pose - Procedure, benefits , dos and don'ts, practical	28-30
11	Chaturangadandasana - Procedure, benefits , dos and don'ts, practical Virabhadraāsana - Procedure, benefits , dos and don'ts, practical	31-33
12	Evaluation	34-36