NS NIS PATIALA

SYLLABUS FOR DIPLOMA IN SPORTS COACHING	
DISCIPLINE:	SHOOTING
COURSE CODE:	SH - 10

Course Framework

Total Credits: 24

Semester 1:

a) Lectures (L): 50
b) Assignment: 4
c) Practical (P) / Self Work (SW) / Field Work (FW): 240
d) Internal Assessment (IA): 30
e) Total Credits: 12

1. Sport Main Content Theory - 1:

- Theory:4 Credits
- Marks Allocation:
  - Internal: 30%
  - External: 70%
- Total Hours:50
- Total Marks: 200
- Total theory modules: 7

2. Sport Main Content Practical - 1:

- Practical: 8 Credits
- Marks Allocation:
  - Internal: 30%
  - External: 70%
- Total Hours: 200
- Total Marks: 400
- Total practical modules: 7

Semester 2:

a) Lectures (L): 50hrs

b) Assignment: 4
c) Practical(P) / Self Work(SW) / Field Work (FW): 200 Hrs
d) Internal assessment: 30%
e) Credits: 12
f) Total theory modules: 7
g) Total practical modules: 7

Sport Main Content Theory- 2:

1) Theory: 4 Credits
2) Marks Allocation:
    i. Internal:30%
    ii. External: 70%
3) Total Hours: 50
4) Total Marks: 200

Sport Main Content Practical - 2:

1. Practical: 8 Credits
2. Marks Allocation:
    i. Internal: 30%
    ii. External: 70%
3. Total Hours: 200
4. Total Marks: 400

Specialization:

Specialization	Lectures	Assignment	Practical / Range Work / Self work
	25 Hrs	2	100 HRS

Assessments:_____

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1. Theory Assessments (Monthly) : Total 4 Assessments – Each Semester
   *Internal

2. Practical /Lab / Field Work (Monthly) : Total 5 Assessments – Each Semester
   *Internal

3. Monthly Quiz / Assignments : Total 4 Assessments – Each Semester
   **Internal/External percentage: 40 % marks of internal assessment to be done on the basis of the marks scored in monthly assessment by adding all the score

4. Theory Exam : At the end of each semester
   *External

5. Practical Exam : At the end of each semester
   * Internal/External percentage: 60 % of total score in Theory

Diploma in Sports Coaching
Proposed Credit Structure

1st Semester

S No	Subject Description	Total Credits	Allocation of Marks %		TOTAL MARKS
			Internal	External	
1	Coaching Dynamics	02	40	60	100
2	Sports and Exercise Physiology	02	30	70	100
3	Kinesiology& Biomechanics	02	30	70	100
4	Strength & Conditioning	03	30	70	150
5	Sports Medicine	02	30	70	100
6	Digital Learning	01	30	70	50
7	Sport Main Content – Theory – I	04	30	70	200
8	Sport Main Content – Practical – I	08	30	70	400
	Total	24	----	----	1200

2nd Semester

S No	Subject Description	Total Credits	Allocation of Marks %		TOTAL MARKS
			Internal	External	
1	Professional Development	02	30	70	100
2	Sports Nutrition &Biochemistry	02	30	70	100
3	Sports Psychology	02	30	70	100
4	Anthropometry	01	30	70	50
5	Sport Main Content – Theory – II	04	30	70	200
6	Sport Main Content – Practical – II	08	30	70	400
7	Internship (2)& Project (1)	03	----	100	150
	Total	22	----	----	1100

AT A GLANCE

Marks as per UGC guidelines are allotted as 50 marks per credit.
Proposed marks therefore stand as follows:
Sport Specific Content (Practical& Theory) - 24* 50 = 1200
Sports Science (Practical& Theory) - 14* 50 = 700
Coaching Dynamics - 2*50 = 100
Professional Development - 2*50=100
Digital Learning - 1*50=50
Internship & Project - 3*50=150
Total ----------2300
1 Credit X 15 Hours

COURSE OBJECTIVES:

1. To impart knowledge and develop the concept of coaching skills in Shooting
2. To demonstrate an awareness and understanding of the concept of quality coaching and associated pedagogical aspects of coaches' work for high performance.
3. To demonstrate an awareness and understanding of coaches' role in the learning of Athletes.
4. To demonstrate an awareness, vision and understanding of the centrality of learning to coaching practice and its implementation practically.
5. To equip them with knowledge of collecting, analysing and organizing information, concepts,ideas and to convey those ideas clearly those ideas clearly and fluently,both theoretically and practically in coaching.
6. To understand the knowledge and respect of ethics and ethical standard in relation to organization of session effectively and efficiently.
7. To enable them to demonstrate adequately and understand what to Observe in the players' performance
8. To develop a concept of realistic coaching and training in reference to modern trends in soccer.

LEARNING OUTCOMES:

1. Identify the basic concept, pedagogy and coaching philosophy to be a successful coach in shooting
2. Impart technical and tactical knowledge of teaching and coaching skills in the Shooting
3. Prepare coaches to understand the systematic preparation of athletes at various levels in shooting
4. Demonstrate the ability to develop the individual skills of the shooting players.
5. Develop an effective planning and programming of coaching sessions in Pistol / Rifle / Shotgun shooting

SKILLS DEVELOPED:

1. Leadership
2. Logical and critical reasoning
3. Decision making
4. Effective communication
5. Problem solving approach
6. Coaching ethics

		Lectures	Assignment	Practical / Range Work / Self work	Internal Assessment	Total Credits Unit
Total Credits:24	Semester - I	50	4	200	30	12
	Semester - II	50	4	200	30	12
	Specialization	25	2	100		

COURSE OBJECTIVES:

- To demonstrate an awareness and understanding of theconcept of quality coaching and associated pedagogicalaspects of coaches work for high performance.
- To demonstrate an awareness and understanding of coachesrole in the learning of Athletes.
- To demonstrate awareness, vision and understanding ofthe centrality of learning to coaches practice and its implementation practically.
- To make enable to collect, analyse and organize information, concepts, ideas and convey those ideas clearly and fluently, both theoretically and practically in coaching.
- To understand the knowledge and respect of ethics and ethical standard in relation to organization of session effectively and efficiently.
- To enable them to demonstrate adequately and understand what to observe in the players' performance.
- To develop a concept of realistic coaching and training in reference to modern trends in shooting.

LEARNING OUTCOMES:

- Enable the students to understand the concept of coaching philosophy

- Enrich the student with knowledge to achieve peak performance
- Ability to develop scientific thinking to enhance Shooting Skills
- Skilled with planning and programming of coaching session efficiently and effectively

SKILLS DEVELOPED:

- Understand science as well as art of coaching
- Leadership qualities
- Critical thinking
- Decision making
- Effective communication

DETAILED SYLLABUS – SEMESTER -I					
THEORY I **TOTAL CREDIT: 4**					
Unit No.	**Description / Topics Covered**	**Teaching Method**	**No. of Hours (Period)**	**Online / Class Room**	**Faculty**
1	**Introduction to shooting**				
	1.1 History of shooting & latest trend.	L	2	Online / Classroom	
	1.2 Structure & functions of shooting controlling bodies.	A	2		
	1.3 Latest training aids.	L & SW	2		
	1.4 Entry into shooting sport	L	2		
2	**Rules of shooting & coaching implication**				
	2.1 Rifle rules	L	2	Online / Classroom	
	2.2 Pistol rules	L	2		
	2.3 Shotgun rules	L	2		
	2.4 Nutrition & Doping	L	1		
	2.5 Management of competition	L & SW	1		
3	**The coaching profession**				
	3.1 Task of a coach &	L	2	Online / Classroom	
	Coaching Philosophy	L	1		
	3.2 Coaching of a training session (action involved to conduct a session)	L	1		
	3.3 Skills required by the coach	L	1		

4	**Development of "game sense"**			Online / Classroom	
	4.1 Game – technique – game – technique – game.	L	1		
	4.2 Game without pressure	L	1		
	– introduce competition –	L	1		
	competition with more	A	1		
	decision making.				

5	**Coaching Methods**			Online / Classroom	
	5.1 Different coaching methods.	L	1		
	5.2 Choice of methods and it's implication.	L	1		
	5.3 Requirement of a player for high performance.	L	1		

6	**Warming – up and cool down before & after training session & match**	L	1	Online / Classroom	
	6.1 Importance, factors and means & methods.	L	1		

7	**Ballistics & Auto Operations**			Online / Classroom	
	7.1 Internal ballistics.	L	1		
	7.2 Intermediate	L	1		

	ballistics.				
	7.3 Terminal ballistics.	L	1		
	7.4 Auto operations I.	L	1		
	7.5 Auto operations II.		1		

8	**Modern trends of training in shooting A modern scientific approach.**				
	8.1 Physical condition and today's game some facts & figure.	L & SW	1	Online / Classroom	
	8.2 Development of Motor abilities keeping in mind the modern trends.	L	1		
	8.3 Scatt & Trace	L	2		
	8.4 Assessment of shooting performance by conducting tests and its comparison.	L & RW	2		

9	**Demands of training and coaching.**				
	9.1 Basic factors of performance –	L	1	Online / Classroom	
	a) Condition – Physical aspect				
	b) Technical skills				
	c) Tactics				
	d) Mental factors				
	9.2 The systematic aspect of training procedures	L	2	Online / Classroom	

	–				
	a) Training plans				
	b) Training Contents				
	c) Training methods				
	d) Training loads				
	e) Training objectives				
	9.3 Demands from the coach.	L	2	Online / Classroom	
	9.4 Coaching Cycle	L	2		

10	**Role of lead up game and National Selection Policy.**	L & SW	2	Online / Classroom	

Total Hours - 50

DETAILED SYLLABUS – SEMESTER -I				
Practical I				
TOTAL CREDIT: 8				
Unit No.	**Description / Topics Covered**	**Teaching Method**	**No. of Hours (Period)**	**Faculty**
1	**Range preparation.**			
	1.1 Match settings through SIUS software.	P	4	
	1.2 Layout of range and safety	P	7	
	aspects.	RW	4	
2	**Fundamentals**			
	a) Stance	P	40	
	b) Holding			
	c) Aiming			
	d) Trigger operation			
	e) Breathing			
	f) Follow through			
	g) Call the shot			
	2.1 Practice	P	45	
	2.2 Match conditions			
3	**Scatt & Trace.**	P	8	
		RW	8	
4	**Rules of the Game.**	P	30	
5	**Pressure situations & match conditions.**	P	8	
		RW	8	
6	**Pedagogic practice – teaching, training and coaching.**	RW	38	
Total Hours – 200				

DETAILED SYLLABUS – SEMESTER -II					
THEORY II **TOTAL CREDIT: 4**					
Unit No.	**Description / Topics Covered**	**Teaching Method**	**No. of Hours (Period)**	**Online / Class Room**	**Faculty**
1	**Motor Skill learning.**	L	1	Online / Classroom	
	1.1 Definition & overview	L	1		
	1.2 Classification of motor skills				
2	**Scheduling practice**			Online / Classroom	
			2		
	2.1 Massed & Distributed				
	practice.				
	2.2 Constant & Variable		2		
	practice.				
	2.3 Blocked & Random		2		
	practice.	L			
	2.4 Whole & Part practice.		2		
	2.5 Practice variable.		1		
	2.6 Contextual		1		
	interference.				
3	**Improving performance though mental practice**			Online / Classroom	
	3.1 Pettlep Model.	L	1		
	3.2 Performance routines.	L	1		
	3.3 The five step strategy.	L	1		
	3.4 Identifying the core components of action.	L	1		

4	**Breathing and Muscle tension / relaxation.**			Online / Classroom	
	4.1 Arousal & Self-regulation overview.	L	1		
	4.2 Breathing & respiratory pause.	L	1		
	4.3 Tension relaxation & response.	L	1		

5	**Motivational Climate for Optimal learning and performance.**			Online / Classroom	
	a) Introduction.	L	1		
	c) Attribution theory.	RW			
			2		
	d) Achievement goal theory.				
	e) Self-determination theory.				

6	**Performance Profiling**			Online / Classroom	
	6.1 Overview.	L	1		
	6.2 Introduction.	L	1		
	6.3 How to conduct performance profiling.	L	1		
	6.4 Assessment.	A	1		

7	**Goal Setting.**			Online / Classroom	
	7.1 Definition & types of goals.	L	1		
	7.2 Why goal setting works.	L	1		

	7.3 Guidelines for goal setting.	L	1		
	7.4 Goal achievement strategies.	L	1		
8	**Talent Identification and its development by LTAD.**	L	2	Online / Classroom	
	8.1 Age group training in relation of physical, physiological, technical , tactical and psychological development.	RW	2		
	8.2 Methods and procedure of scouting of player from grassroots level to professional level.	L	2		
9	**Selecting a team for team / mixed events.**	L	1	Online / Classroom	
10	**Planning & periodization.**			Online / Classroom	
	10.1 Annual plan (Macro Cycle) : Pre-season, in season & off season	L & SW	2		
	10.2 Meso-cycle, Micro cycle & Myo-cycle plan.	L & SW	2		
	10.3 Aims and training contents in each season (periods).	L	2		
	10.4 Tactical periodization.	L	1		
		A	2		
11	**Special feature of training of women**	L	2	Online / Classroom	
		A	1		

12	**Competition Preparation.**	L	1	Online / Classroom	
	12.1 Media relation & public speaking.	L	1		

Total Hours - 50

DETAILED SYLLABUS – SEMESTER -II				
Practical II				
TOTAL CREDIT: 8				
Unit No.	**Description / Topics Covered**	**Teaching Method**	**No. of Hours (Period)**	**Faculty**
1	**Scheduling Practice.**			
	1.1 Training program	P	20	
	a) Designing a program			
	b) Classification			
	c) Individual VS Group			
	1.2 Styles	P	15	
	a) Massed & Distributed			
	b) Constant & Variable			
	c) Blocked & Random			
	d) Whole & Part			
2	**Breathing & Muscle relaxation.**			
	2.1 Respiratory pause.	P	20	
	a) Normal breathing cycle.			
	b) Shooters breathing cycle.			
	2.2 Tension Relaxation & response.	P	15	
3	**Motivation**	P	20	
4	**Performance Profiling**	P & RW	45	
5	**Goal Setting**	P	15	
		RW	20	
6	**Talent Identification**	RW	30	
Total Hours - 200				

DETAILED SYLLABUS – Specialization - “Rifle”				
Theory				
TOTAL Hours: 25				
Unit No.	**Description / Topics Covered**	**Teaching Method**	**No. of Hours (Period)**	**Faculty**
	1.1 • Shooting positions • Standing – Prone • Kneeling	L	3	
	1.2 Biomechanics analysis of the position • Feet, legs and hips position • Position of the back and shoulders • Left arm and elbow position • Right arm position • Position of the head	L	3	
	1.3 • Position of the butt plate in the shoulder and length of the rifle stock • Body balance, rifle balance & balance system shooter-rifle • Various position modifications in relationship with body constitution of the shooter		3	
	1.4 • Position and size of the shooting cushion • Length of the sling • Differences in position between AR and FR		3	
	1.5			

	• Aiming & Sighting Technique –Standing, Prone & Kneeling		3	
	1.6 • Triggering Technique – Standing, Prone & Kneeling		3	
	1.7 • Breathing Technique– Standing, Prone & Kneeling		3	
	1.8 • Shooting in different weather conditions		2	
	1.9 • Weapon maintenance		2	

Total Hours - 25

DETAILED SYLLABUS – Specialization – "Rifle"				
Practical				
TOTAL Hours: 100				
Unit No.	**Description / Topics Covered**	**Teaching Method**	**No. of Hours (Period)**	**Faculty**
	1.1 Methodology of approaching and taking shooting position - Standing • Prone • Kneeling	L	15	
	1.2 • Establishing middle line of position • Establishing" Zero Point" in the middle of the target • Position correction, for each position	L	12	
	1.3 • Correction of the sighting elements on the rifle & sling corrections	L	8	
	1.4 • Exercises for developing basic shooting skills	L	5	

	1.5 • Work with beginners– didactical approach, siting position, standing position with support • Developing Shooting School System	L	8	
	1.6 • How to aim • Size of the ring and opening of the blend • Approaching center of the target • Grip and gripping • Aiming – Breathing coordination	L	20	
	1.7 • Detecting critical point based on shot group • Detecting critical points based on rifle recoil • Corrections of the most common mistakes • Tactics in shooting	L	20	
	1.8 • Shooting diary • Use of optoelectronic equipment	L	6	
	1.9 • Weapon and ammo testing	L	6	

DETAILED SYLLABUS – Specialization – "Pistol"				
Theory				
TOTAL Hours: 25				
Unit No.	**Description / Topics Covered**	**Teaching Method**	**No. of Hours (Period)**	**Faculty**
	1.1 • Requirements for building a correct shooting stance • The leg position • The body position • The arm & hand positions • The head position	L	6	
	1.2 • The gun gripping technique	L	2	
	1.3 • Vertical movement to target (for precision disciplines and SP RF)	L	2	
	1.4 • Horizontal movement with transition (RFP)	L	2	
	1.5 • Sighting techniques for precision disciplines • Sighting techniques for SP RF • Sighting techniques for RFP (vertical and horizontal)	L	5	
	1.6 • Triggering techniques for each discipline (precision and dynamic) • Follow through	L	5	
	1.7 • Shooting in different weather conditions • Weapon maintenance	L	3	

DETAILED SYLLABUS – Specialization – "Pistol"				
Practical				
TOTAL Hours: 100				
Unit No.	**Description / Topics Covered**	**Teaching Method**	**No. of Hours (Period)**	**Faculty**
	1.1 Methodology of approaching and taking shooting position - Air Pistol - Sport Pistol - Rapid Fire Pistol	L	20	
	1.2 • Establishing middle line of position • Establishing "Zero Point" in the middle of the target • Position correction, for each discipline	L	15	
	1.3 • Corrections of the grip, and proper grip fitting	L	6	
	1.4 • Exercises for developing basic shooting skills Work with beginners– didactical approach, siting position, standing position with support Developing Shooting School System	L	10	

	1.5 How to aim and sight Approaching center of the target	L	15	
	1.6 Grip and gripping Detecting critical point based on shot group	L	10	
	1.7 Corrections of the most common mistakes Tactics in shooting	L	10	
	1.8 Shooting diary Use of optoelectronic equipment	L	8	
	1.9 Weapon and ammo testing	L	6	

DETAILED SYLLABUS – Specialization – "SHOTGUN"				
Theory				
TOTAL Hours: 25				
Unit No.	**Description / Topics Covered**	**Teaching Method**	**No. of Hours (Period)**	**Faculty**
	1.1 • The shooting stance • The body position • The arm & hand positions • The head position	L	8	
	1.2 • The gun hold positions • The eye hold positions	L	3	
	1.3 • Initial movement to target • Transition phase of movement		4	
	1.4 • Sight Picture • Triggering • Post-Shot Actions		8	
	1.5 • Shooting styles		2	

Total Hours - 25

DETAILED SYLLABUS – Specialization – "Shotgun"				
Practical				
TOTAL Hours: 100				
Unit No.	**Description / Topics Covered**	**Teaching Method**	**No. of Hours (Period)**	**Faculty**
	1.1 • Methodology of approaching and taking shooting position • Position correction, for each discipline	L	25	
	1.2 • Corrections of the shotgun grip, and proper gun fitting	L	15	
	1.3 • Exercises for developing basic shooting skills • Work with beginners – didactical approach, skeet position, trap position • Developing Shooting School System	L	15	
	1.4 • How to determine when to move to the	L	10	

	target			
	1.5 • Good and bad components of different styles	L	6	
	1.6 • Shooting in different weather conditions	L	5	
	1.7 • Corrections of the most common mistakes • Tactics in shooting	L	12	
	1.8 • Shooting diary • Use of video equipment	L	6	
	1.9 • Ammo testing	L	6	

Training Books, Journals, Online Resources Prescribed for Trainees

1. **ISSF NATIONAL COACH COURSE** :-
    - Sport Science (First level)
    - Sport Science (Second level)
    - Pistol Shooting
    - Pistol Shooting (Shooting Position)
    - Rifle Shooting
    - Rifle Shooting (Shooting Positions)
    - Clay Target (Ready Position)
    - Clay Target (Movement to the target)

2. **ADeL User Guide (WORLD ANTI-DOPING AGENCY) :-**

ASSESSMENT			
Theory Monthly Assessment	**SEMESTER 1**	**SEMESTER 2**	**INTERNAL / EXTERNAL %**
	Monthly Assessment using online testing tools with multiple choice & descriptive questions of covered topics the month.	Monthly Assessment using online testing tools with multiple choice & descriptive questions of covered topics during the month.	40% Marks of Internal Assessment will be done on the basis of the marks scored in monthly assessment by adding all the score.
	Total – 4 Assessments	**Total – 4 Assessments**	**Test data will be recorded for reference**
Monthly Practical / Lab / Field	Monthly Assessment Practical demonstration & Execution of learnt techniques.	Monthly Assessment Practical demonstration & Execution of learnt techniques.	40% Marks of Internal Assessment will be done on the basis of the marks scored in monthly assessment by adding all the scores.
	Total – 5 Assessments	**Total – 5 Assessments**	**Test data will be recorded for reference**

Monthly Quiz /Assignments	1 Assignment per month.	1 Assignment per month.	40% of Marks of Internal Assessment will be done on the basis of the marks scored in monthly assessment by adding all the scores.
	Total – 4 Assignments	**Total – 4 Assignments**	**Test data will be recorded for reference**

ASSESSMENT			
Theory Exam	At the end of Semester – I	At the end of Semester – II	60% of total score in theory.
Practical Exam	At the end of Semester – I	At the end of the Semester - II	60% of total score in Practical

Specialization Syllabus: (Rifle, Pistol & Shotgun)

Rifle Topics

Theoretical contents

The rifle discipline will cover technical analysis in rifle shooting and the basics of shooting positions in:

- Shooting positions
- Standing – Prone
- Kneeling

1. Biomechanics analysis of the position
2. Feet, legs and hips position
3. Position of the back and shoulders
4. Left arm and elbow position
5. Right arm position
6. Position of the head
7. Position of the butt plate in the shoulder and length of the rifle stock
8. Body balance, rifle balance & balance system shooter-rifle
9. Various position modifications in relationship with body constitution of the shooter
10. Position and size of the shooting cushion
11. Length of the sling
12. Differences in position between AR and FR
13. Aiming & Sighting Technique – Standing, Prone & Kneeling
14. Triggering Technique – Standing, Prone & Kneeling
15. Breathing Technique– Standing, Prone & Kneeling
16. Shooting in different weather conditions
17. Weapon maintenance

Practical activities in the field based on the above theoretical contents

1. Methodology of approaching and taking shooting position - Standing

   - Prone

   - Kneeling

2. Establishing middle line of position
3. Establishing“ Zero Point” in the middle of the target
4. Position correction, for each position
5. Correction of the sighting elements on the rifle & sling corrections
6. Exercises for developing basic shooting skills
7. Work with beginners–didactical approach, siting position, standing position with support
8. Developing Shooting School System
9. How to aim
10. Size of the ring and opening of the blend
11. Approaching center of the target
12. Grip and gripping
13. Aiming – Breathing coordination
14. Detecting critical point based on shot group
15. Detecting critical points based on rifle recoil
16. Corrections of the most common mistakes
17. Tactics in shooting
18. Shooting diary
19. Use of optoelectronic equipment
20. Weapon and ammo testing

Pistol Topics

Theoretical contents

The Pistol shooting technique describes the position for Air Pistol, Sport Pistol and Rapid Fire Pistol. For each discipline, the techniques are explored in great detail focusing on the biomechanical requirements and analysis, as well their advantages and disadvantages. The course will also cover the gripping technique of the pistol in depth.

1. Requirements for building a correct shooting stance 2. The leg position
2. The body position

3. The arm & hand positions
4. The head position
5. The gun gripping technique
6. Vertical movement to target (for precision disciplines and SP RF)
7. Horizontal movement with transition (RFP)
8. Sighting techniques for precision disciplines
9. Sighting techniques for SP RF
10. Sighting techniques for RFP (vertical and horizontal)
11. Triggering techniques for each discipline (precision and dynamic)
12. Follow through
13. Shooting in different weather conditions
14. Weapon maintenance

Practical activities in the field based on the above theoretical contents

1. Methodology of approaching and taking shooting position
    - Air Pistol
    - Sport Pistol
    - Rapid Fire Pistol
2. Establishing middle line of position
3. Establishing “Zero Point” in the middle of the target
4. Position correction, for each discipline
5. Corrections of the grip, and proper grip fitting
6. Exercises for developing basic shooting skills
7. Work with beginners–didactical approach, siting position, standing position with support
8. Developing Shooting School System
9. How to aim and sight
10. Approaching center of the target
11. Grip and gripping
12. Detecting critical point based on shot group
13. Corrections of the most common mistakes
14. Tactics in shooting
15. Shooting diary
16. Use of optoelectronic equipment
17. Weapon and ammo testing

Shotgun Topics

Theoretical contents

The shotgun shooting technique looks at the development of the Ready position for both Skeet and Trap. A detailed analysis of the necessary requirements to successfully produce an efficient Ready Position.

1. The shooting stance
2. The body position
3. The arm & hand positions
4. The head position
5. The gun hold positions
6. The eye hold positions
7. Initial movement to target
8. Transition phase of movement
9. Sight Picture
10. Triggering
11. Post-Shot Actions
12. Shooting styles

Practical activities in the field based on the above theoretical contents

1. Methodology of approaching and taking shooting position
2. Position correction, for each discipline
3. Corrections of the shotgun grip, and proper gun fitting
4. Exercises for developing basic shooting skills
5. Work with beginners – didactical approach, skeet position, trap position
6. Developing Shooting School System
7. How to determine when to move to the target
8. Good and bad components of different styles
9. Shooting in different weather conditions
10. Corrections of the most common mistakes
11. Tactics in shooting
12. Shooting diary
13. Use of video equipment 8. Ammo testing

SPORTS AUTHORITY OF INDIA

Netaji Subhas National Institute of Sports, Patiala

Details of the Speakers and Guest Faculty Members for shooting Diploma 2022

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9	Mr. Subhash Rana	Pistol Event	subhashrana1@gmail.com
10	Mr. Omprakash	Pistol Event	op.shooter2012@gmail.com
11	Mr. Samresh Jung	Pistol Event	samjung70@gmail.com
12	Omkar	Pistol Event	7812822270
13	Rajiv Sharma	Pistol Event	rajiv_lawyer@hotmail.com
14	Ronak Pandit	Pistol Event	ronakpandit@yahoo.com
15	Vikram Chopra	Shotgun	chopravikram3@gmail.com
16	Harinder Bedi	Shotgun	bedihari@yahoo.com
17	Mansher singh	Shotgun	manshersingh65@gmail.com
17	Krishna kumar	Shotgun	krishna.changalath@gmail.com
18	Mr. Padmanabham	Shotgun	vu2pmm@yahoo.co.in
19	Mr. Hemraj	Shotgun	hraj2850@gmail.com

SPORTS AUTHORITY OF INDIA

SYLLABUS FOR DIPLOMA IN SPORTS COACHING COURSE

DISCIPLINE: STRENGTH & CONDITIONING

COURSE CODE:

Total Credits:01	Semester - I	L	Assignment	P/FW	SW	TOTAL CREDIT UNITS
		(L-Lecture, P-Practical,SW-Self Work, FW-Field Work)				

COURSE OBJECTIVES

For the coaching profession, a thorough knowledge of conditioning is essential because the performance of most of the Olympic events depends on high level of physical fitness. This subject will provide adequate technical information and skill to the coaches for designing appropriate programmes for the development of various fitness components. Moreover, they will have proper idea of organizing training programmes and planning/periodizing the training. In addition to this, the coaches will have clear idea of test measurement and evaluation and monitoring of training process.

LEARNING OUTCOMES

After learning this subject, the students will get proper idea of strength and conditioning and will be able to design different programmes for strength and conditioning.

SKILLS DEVELOPED

- Achieve proficiency in different exercise execution.
- Achieve adequate skill for the selection of appropriate exercise suitable for different sports discipline, age group and different phases of training programmes

DETAILED SYLLABUS - SEMESTER I					
THEORY PAPER					
Unit No	**Description/Topics Covered**	**Teaching Method**	**No. of Hours (Period)**	**Online /Class room**	**Faculty Description**

1	**Introduction to strength training and conditioning** • Meaning/ Definition of conditioning, physical fitness, health related fitness and performance related fitness, components of physical fitness • Warm up, definition, types and importance of warm up	L	06		Dr K P Manilal, SSO, GTMT, SAI, Bangalore
2	**Concept of training load, factors of load, functions of load, load monitoring, recovery and overtraining, Training principles (overload, individualization, progression, specificity, variations, diminishing return and reversibility)**	L	06		
3	**Periodization** General concepts related to periodization, definition, types, training periods, periodization models	L/T	05		
4	**Strength Training modalities** • Definition of strength, types of strength, benefits of strength training, strength training modalities (body weight, partner, machines, free weights etc), its advantages and disadvantages • Exercise techniques for alternative modes and non-traditional implement training	L	05		

5	**Programme design for resistance training** • Exercise prescription, steps (needs analysis, exercise selection, exercise order, number of repetitions and sets, rest periods), Periodization of strength training • Programme design for plyometric training, speed and agility training and balance • Strength training for different population (children, females and senior citizens)	L	07		
6	**Programme design for aerobic endurance training** Endurance Definition, types and importance, factors related to aerobic endurance performance, Modalities for aerobic endurance, designing aerobic training programme, Periodization of aerobic endurance.	L	06		
7	**Programme design for speed, agility, quickness and balance** • Speed definition, importance, factors affecting speed. Programme designing for speed, Periodization of speed • Meaning and definition of Agility, quickness and balance, importance and programme designing	L	06		

8	**Programme design and techniques for flexibility training** • Flexibility definition, importance, types and factors related to flexibility • Programme designing and methods of flexibility training	L	04		
9	**Evaluation of physical fitness components** • Tests, measurements and evaluation (types of tests, evaluation and interpretation of the data), different test protocols for the evaluation of motor abilities		05		
Total hours: 50					

DETAILED SYLLABUS - SEMESTER I					
PRACTICAL PAPER					
Unit No.	**No/Description/Topics Covered**	**Teaching Method**	**No. of Hours (Period)**	**Online /Class room**	**Faculty Description**
	• Body weight exercises • Partner exercises • Medicine ball exercises • Dumbbell exercises • Machine based exercises • Free weight strengthening	**L/A/P/SW/FW**	40		In house*

	exercises • Non-traditional strengthening exercises (tyres, ropes etc.) • Endurance training protocols (continuous, interval methods etc.) • Speed, agility drills, exercises for quickness, balance and coordination • Flexibility training (different methods of stretching • Motor ability tests				
Total hours: 40					

Training Books, Journals, Online Resources Prescribed for Trainees

1. Haff, G. Gregory, Triplett, N. Travis. Essentials of strength training and conditioning. 4th Edition, Human Kinetics.
2. Nicholas A. Ratamess. ACSM's Foundations of Strength Training and Conditioning. Wolters Kluwer Health/Lippincott Williams & Wilkins, 2011
3. Fleck, Steven J., Kraemer, William. Designing Resistance Training Programs. 4th Edition. Human Kinetics
4. Vladimir M. Zatsiorsky, William J. Kraemer. Science and Practice of Strength Training. 3rd Edition. Human Kinetics
5. K.P Manilal. Science of strength training. Sports Publications, New Delhi, 2007
6. K.P Manilal. Scientific Aspects of Flexibility Training. Friends Publications, New Delhi, 2012
7. Jay Dawes, Mark Roozen. Developing Agility and Quickness-Human Kinetics (Sports Performance) NSCA -National Strength & Conditioning Association, - (2011)
8. Ian Jeffreys. Developing speed-Human Kinetics (Sport performance series) _ National Strength & Conditioning Association (U.S.) - (2013)

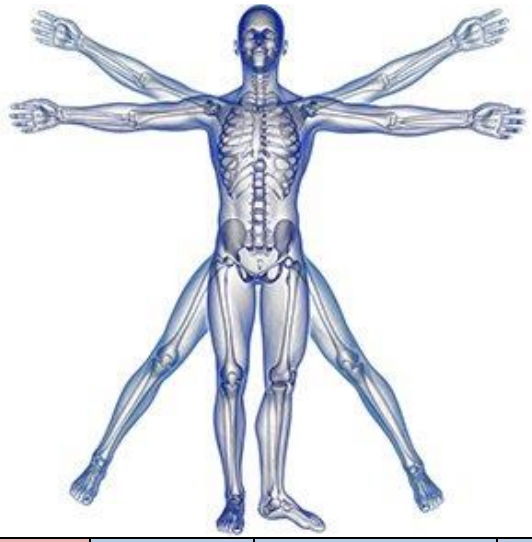
Assessment

Strength and conditioning			
Semester 1	Theory	• 1st MCQ test (after completion of units 1-3)-**06 marks (1*6)** • 2nd MCQ test (after completion of units 4-6)-**07 marks(1*7)** • 3rd MCQ test (after completion of units 7-9)-**07 marks(1*7)**	Written/online examination
	Practical	• Practical viva-voce (after completion of the syllabus)-**10 marks**	

SYLLABUS FOR DIPLOMA IN SPORTS COACHING COURSE

DISCIPLINE: EXERCISE PHYSIOLOGY

COURSE CODE:



Total Credits:02	Semester - I	L	Assignment	P/FW	SW	TOTAL CREDIT UNITS
						02
		(L-Lecture, P-Practical,SW-Self Work, FW-Field Work)				

COURSE OBJECTIVES

- To understand the basic idea of different systems of human body.
- To understand the physiological basis of training, acute responses and chronic adaptations of various systems.
- To know about different energy systems and their contributions to

different types of activities in various sports and games.

- ❖ To understand different environmental influences on training and performance under different climatic conditions.
- ❖ To acquire basic knowledge of training to young children and the important physiological considerations.
- ❖ To know about gender difference in performance
- ❖ To know about hormonal changes due to exercise

LEARNING OUTCOMES

- ❖ About the functioning of different systems
- ❖ About the functional changes of different systems during excise and after training
- ❖ How to develop different aerobic and anaerobic quality by understanding the involvement of different energy system for different types of activity
- ❖ About environmental influence on training
- ❖ How to assess different physiological parameters like Heart rate, strength, Oxygen consumption and their practical implications

DETAILED SYLLABUS - SEMESTER I					
THEORY PAPER					
Unit No	**Description/Topics Covered**	**Teaching Method**	**No. of Hours (Period)**	**Online /Class room**	**Faculty**
1	**Basic understanding of different systems of human body**	**L**		**Online**	
	• An overview of the system of organization in the human body • Cardiovascular system- structure of heart and blood		**1** **3**		

	circulation through human heart, functions of blood • Respiratory system- respiratory pathways, mechanism of breathing, lung volumes and lung capacities • Neuromuscular system- structure of skeletal muscle and motor unit. Mechanism of muscular contraction, types of muscle fibres. Physiological basis of fatigue and recovery.		**2** **4**		
2	**Physiology of training and performance**	L		Online	
	• Cardiovascular control during exercise- acute response and long-term adaptations in cardiovascular system. Determination of target heart rate • Bioenergetics- aerobic and anaerobic energy metabolism during exercise, contributions of different energy systems to various sports and games. Lactic acid and its relevance in sports • Physiology of training- effect of VO2 max performance homeostasis and strength • Physiology of strength training	L	**2** **3** **3** **2**		
3	**Environment, age, gender and sports performance**	L		Online	

	• High altitude training- Immediate physiological changes in high altitude, long term adaptations, importance of high-altitude training • Body temperature regulations in hot and cold environments • Physiological basis of selection and training of young children • Physiological differences between men and women, differences in athletic abilities, female athletes' triad • Hormonal responses to exercise		**2** **2** **2** **2** **2**		
Total hours: 30					

DETAILED SYLLABUS - SEMESTER I					
PRACTICAL PAPER					
Unit No.	**No/Description/Topics Covered**	**Teaching Method**	**No. of Hours (Period)**	**Online/ Classroom**	**Faculty**
1.	Measurement of heart rate by different methods and heart rate monitoring during training	P	3	Classroom	
2.	Dynamometry- measurement of back strength and grip strength	P	3	Classroom	

3.	Assessment of maximum aerobic capacity (VO2 Max)-Direct and indirect method	P	3	Classroom	
4.	Assessment of anaerobic power- Direct and indirect method	P	3	Classroom	
5.	Determination of anaerobic threshold	P	3	Classroom	
Total Hours - 15					

Training Books, Journals, Online Resources Prescribed for Trainees

9. 1. Physiology of sports and Exercise. Wilmore JH, Costill DL. Human Kinetics publishers
10. 2. Exercise Physiology: Theory and application to Fitness and performance. Scott K Powers, Edward T. Howley. Mc Graw Hill.
11. 3. Physiological Basis for Exercise and Sport. Edward L Fox. Mc Graw Hill.

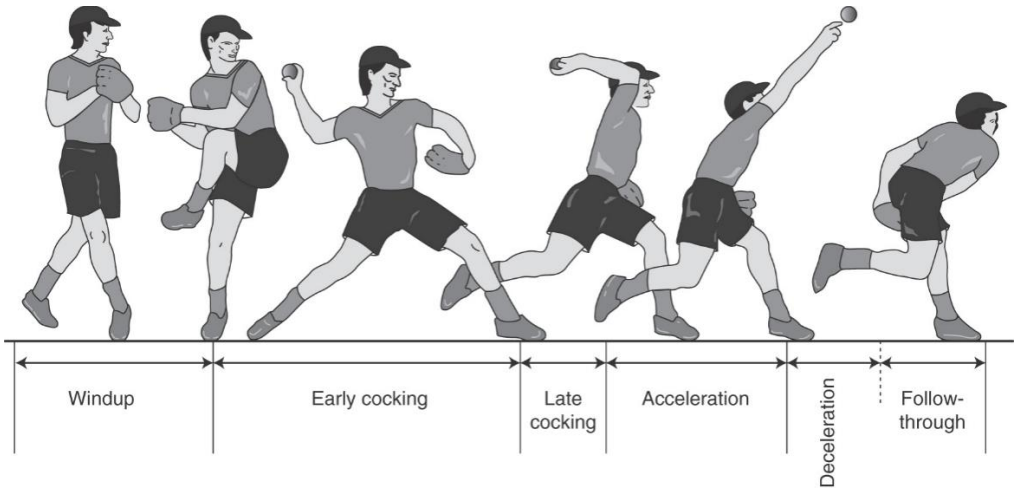
Assessment

Sports & Exercise Physiology			
Semester 1	Theory	• 1st MCQ test (after completion of 1st unit)- **08 marks (1*8)** • 2nd MCQ test (after completion of 2nd unit)- **08 marks (1*8)** • 3rd MCQ test (after completion of 3rd unit)-**08 marks (1*8)**	Written/online examination

SYLLABUS FOR DIPLOMA IN SPORTS COACHING COURSE

DISCIPLINE: BIOMECHANICS

COURSE CODE:



Total Credits:	Semester - I	L	Assignment	P/FW	SW	TOTAL CREDIT UNITS
		(L-Lecture, P-Practical,SW-Self Work, FW-Field Work)				

COURSE OBJECTIVES

- To learn about fundamentals of defining joint movements in different planes and axis.
- To give an overview of major muscles acting at various joints
- To introduce and understand of the core concepts of biomechanics

& kinesiology in relation to sports action through a combination of theory and practicals.

- To understand the difference between qualitative and quantitative analysis of sports movements

LEARNING OUTCOMES

- Describe the basic movement patterns and joints involved in respective sports actions and exercises.
- Identify major muscles acting at particular joints in a particular sports action
- Perform qualitative analysis of sports movements

SKILLS DEVELOPED:

- They would be able to identify the muscles acting at joints and describe basic movement patterns related to sports and exercises.

DETAILED SYLLABUS - SEMESTER I					
THEORY PAPER					
Unit No	**Description/Topics Covered**	**Teaching Method**	**No. of Hours (Period)**	**Online /Class room**	**Faculty Description**
1	**Basics of Kinesiology:** • Introduction to Kinesiology and its importance in	L	3	Online	**Dr Praveen Nair, JSO, Biomechanics, SAI, NSSC Bangalore**

	coaching • Concept of reference system and its significance, various references, Centre of gravity • Mechanical axis, anatomical and standard standing position • Types of planes and axes • Definition and explanation of various fundamental and auxiliary movements				
2	**Major muscles, joint and their actions** • Overview of Skeletal system, • Type of joints, • Types of muscle actions, • Major muscles acting at hip, knee, shoulder, elbow joint, shoulder girdle and trunk region	L	06	Online	
3	**Posture** • Definition of posture • Importance of good posture • Characteristics of good posture • Factors affecting posture/causes of poor posture	L	02	Online	
4	**Structure of motor action** • Definition of motor action • Classification: types	L	02	Online	

	of movements i.e. acyclic, cyclic and movement combination • Phases of movements and their importance, Functional relationship among various phases of movement, • Structure of acyclic, cyclic and movement combination with example and functions of various phases				
5	**Kinesiological analysis of basic movements** **a.** Walking, running (differences between walking and running) jumping, throwing	L	03	Online	
6	**Introduction to sports Biomechanics** • Definition of Sports Biomechanics • Role of Sports Biomechanics and its contribution in the field of sports	L	01	Online	
7	**Forms of Motion** • **Linear motion-** Definition, units and explanation of different values in linear motion viz. Distance, displacement, speed,velocity, acceleration, acceleration due to gravity, inertia, mass, force, weight, momentum, impulse, pressure and	L	04	Online	

	relationship between pressure and area implication between their relationship • **Angular motion**- Definition, units and explanation of different values in angular motion like angular distance, angular displacement, angular velocity, angular acceleration, relationship between angular and linear motion; eccentric force, couple, torque, moment of inertia and interrelationship between moment of inertia, angular momentum and angular velocity				
8	**Newton's laws and Projectile motion** • Law of inertia, Law of acceleration, Law of action and reaction • Fundamental definition of projectile, trajectory, range, angle of release, point of release, velocity of release, point of landing height of projectile, time of descent, time of flight, relative height of release. • Various situations of projectile motion and their characteristics and implications in sports	L	03	Online	

9	**Levers, Equilibrium and stability** • Types of levers, Anatomical levers of body, • Principles of leverage. • Definition of equilibrium and stability • Centre of gravity and its importance • Factors affecting stability and equilibrium and their implication	L	03	Online	
10	**Types of Forces** • Internal and external forces, • Effect of characteristics of force • Summation of force • Centripetal and centrifugal force • Friction –its cause, types and factors affecting different types • Gravitational force	L	03	Online	
Total hours: 30					

DETAILED SYLLABUS - SEMESTER I					
PRACTICAL PAPER					
Unit No.	**No/Description/Topics Covered**	**Teaching Method**	**No. of Hours (Period)**	**Online /Classroom**	**Faculty Description**
1. **2.** **3.** **4.** **5.** **6.**	Analysis of fundamental and auxiliary movements Introduction to kinovea software (2D motion analysis). How to use kinovea for 2 D skill analysis. Linear kinematic analysis of a 15 m sprint using timing gates/ stop watch. Muscular analysis of fundamental movements by palpation method Demonstration of Newton's law of motion Spin on ball –its causes and effects	P/FW	**15**	Classroom	
Teaching hours: 15					

Training Books, Journals, Online Resources Prescribed for Trainees

12. Biomechanics of sports and exercise. Peter M. McGinnis. Human Kinetics Publisher
13. Basic Biomechanics. Susan J Hall. Mc Graw Hill
14. Biomechanical basis of human movement. Joseph Hamill, Kathleen M. Knutzen. Lippincott Williams & Wilkins
15. Clinical Kinesiology. Lynn S. Lippert. F. A. Davis Company
16. Introduction to sports Biomechanics: Analyzing human movement patterns. Roger Bartlett. Routledge

Assessment

Sports Biomechanics			
Semester 1	Theory	• 1st MCQ test (after completion of 1st and 2nd units)- **08 marks (1*8)** • 2nd MCQ test (after completion of 3rd, 4th & 5th units)- **08 marks (1*8)** • 3rd MCQ test (after completion of 6 -10 units)- **08 marks (1*8)**	Written/online examination
	Practical	• Practical viva-voce (after completion of the syllabus)-06 marks **(1*6)**	

SYLLABUS FOR DIPLOMA IN SPORTS COACHING COURSE

DISCIPLINE: SPORTS MEDICINE

Course Objectives

- To teach about various types of sports injuries including their causes,mechanism, first aid management and rehabilitation.
- To give an overview of general concepts of physiotherapy and its role inmanagement of sports injuries.
- To teach various recovery methods used in sports and their applications.
- To enable the students understand about various ergogenic aids, doping relatedissues and anti-doping education.

Learning outcomes

- To be able to identify various risk factors for sports injuries and formulateappropriate prevention strategies.
- To be able to identify injuries on ground and to perform on ground first aid andmanagement of sports injuries.
- To be able to implement and supervise rehabilitation protocols on injured athletesbefore return to play.
- To be able to effectively utilize various recovery methods in sports training.
- To know about various issues related to doping and develop the culture of dopefree sport.

Existing Syllabus	Revised Syllabus (to include)	Teaching Hours	Assessment	Remarks
Unit-1				Teaching possible through Online or video lectures
i. Introduction to Sports Medicine		02	MCQ and Assignment	
ii. Basic Anatomy of Musculoskeletal system		02		
Unit-2				
iii. Prevention of Sports injuries Risk factors Preventive measures	Prevention of illnesses in Sports - Sports Hygiene	04	MCQ and Assignment	
iv. Injuries in Sports Classification of injuries Skin injuries Muscular injuries Ligament injuries Bone injuries Common site specific injuries in sports		04		
Unit-3				
v. Sports Emergencies and first aid		02		

vi. Sports Physiotherapy General principal of Physiotherapy Exercise therapy Manual therapy Electrotherapy		03	MCQ and Assignment	
Unit-4				
vii. Sports Rehabilitation Principal of Rehabilitation Phases of Rehabilitation		03		

viii. Recovery in sports Medico biological means of recovery Ice Bath Massage Sauna bath Steam bath		03	MCQ and Assignment	
ix. Erogenic aids in sports		01		
Doping Definition Classification Hazards of Doping: Short and longterm IOC rules: role of coach and athlete TUE		03		
Total teaching hours		27		

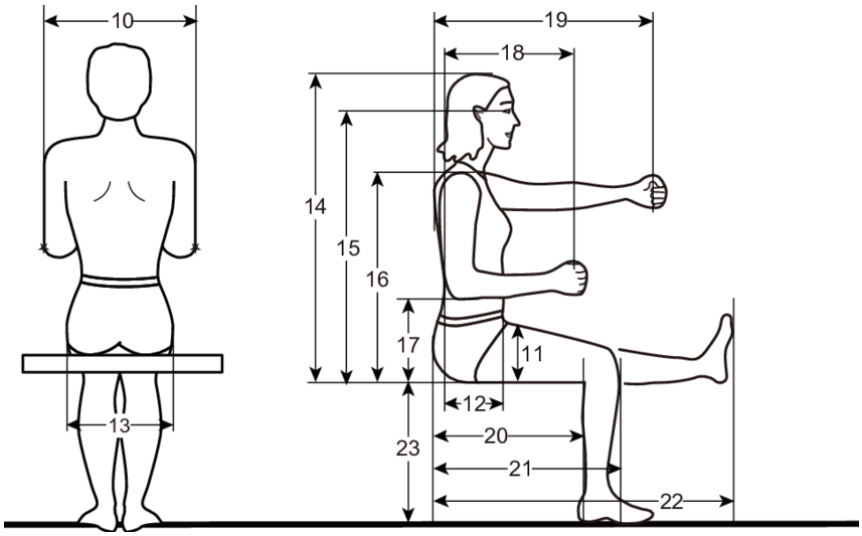
Practical

Existing Syllabus	Revised Syllabus (to include)	Teaching Hours	Assessment	Remarks
First aid Sports injuries BLS-CPR		06	MCQ/ Quiz	Can be demonstrated through Online and video lectures
Bandaging, Strapping, Taping				
Massage				
Exercise therapy (post traumatic				
Rehabilitation)				
Dope sampling				
Total teaching hours		06		

SYLLABUS FOR DIPLOMA IN SPORTS COACHING COURSE

DISCIPLINE: ANTHROPOMETRY

COURSE CODE:



Total Credits:01	Semester - I	L	Assignment	P/FW	SW	TOTAL CREDIT UNITS
		12	0	06	0	01
		(L-Lecture, P-Practical,SW-Self Work, FW-Field Work)				

PROPOSED SYLLABUS OF SPORTS ANTHROPOMETRY

FOR DIPLOMA IN SPORTS COACHING

Course Name: Sports Anthropometry

Course Credit: 01

L	T	P	SW/FW	TOTAL CREDIT
12	0	06	0	01

Course Objectives:

1. To gain an understanding on the application of anthropometry in growth, nutrition and performance.
2. Human growth and development unit will help students comprehend, how changes that accompany human growth affect skill, exercise tolerance, injury potential of an individual overtone.
3. Describe theoretical views on body composition and its role in sports participation, recommended methods for body composition assessment.
4. To obtain hands-on experience and basic training in common anthropometric measurements.

Learning Outcomes: By the end of the course, the students will be able to-

1. Understand the application of anthropometry in sports.
2. Understand the changing aspect of human growth and its role in training.
3. Find out the indicators of an athlete health and fitness, its correlation with nutrition and performance.
4. Comprehend the importance of indices for talent identification.
5. Correlate physique and performance in sports.

6. Obtain standardized technique of measurements.

Skills Developed:

1. Knowledge of which parameters to be assessed at a given age, training phase of an athlete.
2. Take basic anthropometric measurements.

Readings:

1. Kinanthropometry and Exercise Physiology (4th Edition) Manual by Roger Eston and Thomas Reilly, 2019
2. Handbook of Research for Biomechanics & Anthropometry in Sport Science by Zahra Hojjati Zidashti , Soheila Yavarmasroor , Kaveh Hariri Asli, 2017
3. Best Practice Protocols of Physique Assessment in Sport by Patria A. Hume, Deborah A. Kerr, Timothy R. Ackland, 2018

THEORY:

Unit No/Description/Topics Covered	Teaching Method	No. of Hours (Period)	Online /Class room	Faculty Description
Unit -1: Kinanthropometry • Introduction and Application of Kinanthropometry in sports	L	02	Online	In house*
Unit 2: Human Growth and Development • Meaning of growth and stages of Human Growth • Adolescent growth spurt: its effect on training • Growth curve, Determination of Velocity and Distance Curve • Concept of maturity: early, average and late mature • Developmental age, and role of developmental age in sports	L	04	Online	In house*

Unit 3: Body composition • Introduction, factors influencing body composition • Body composition as a health and fitness indicator in sports • Methods to estimate human body composition • Determination of body composition: muscle mass, bone mass and fat mass	L/T	03	Online/ classroom	In house*
Unit 4: Concept of Physique &Somatotype • Physique: a. Introduction b. Physique in different sports and Games • Somatotype a. Different components, importance and scope in sports b. Heath and Carter's method of somatotyping c. Plotting of Somatotype chart	L	03	Online	In house*
Teaching hours: 12				

PRACTICAL:

Unit No/Description/Topics Covered	Teaching Method	No. of Hours (Period)	Online /Class room	Faculty Description
• Body landmarks	P	01	Classroom	In house*
• Anthropometric instrument: - its handling technique	P	01	Classroom	In house
• Anthropometric measurements	P	02	Classroom	In house*
• Hands on training	P	02	Classroom	In house*
Teaching hours: 06				

INTERNAL ASSESSMENT:

Component	Method
Home Assignment	Scoring

*** In-House Faculty members**

1. Dr. Jaswinder Singh (JSO, Patiala)
2. Mr. Yumnam Momo Singh (JSO, Patiala)

3. Mr Sukhdeep Singh Kang (JSO, Patiala)
4. Dr. Athoni Rhetso (JSO, Bangalore**)**

Assessment

Sports Anthropometry INTERNAL (TOTAL MARKS=15, 1 credit)			
Semester 1	Theory	• 1st MCQ test (after completion of 1st & 2nd unit)- **04 marks (1*4)** • 2nd MCQ test (after completion of 3rd & 4th unit)- **04 marks (1*4)**	Written/online examination
	Practical	• Practical viva-voce (after completion of the syllabus)-07 marks **(1*7)**	

SYLLABUS FOR DIPLOMA IN SPORTS COACHING COURSE

DISCIPLINE: BIOCHEMISTRY & NUTRITION

COURSE CODE:

Total Credits:01	Semester - I	L	Assignment	P/FW	SW	TOTAL CREDIT UNITS
						02
		(L-Lecture, P-Practical,SW-Self Work, FW-Field Work)				

COURSE OBJECTIVES

- Basic understanding regarding macronutrients and micronutrients and their specific role in sports
- Understanding regarding sports specific issues such as hydration,

weight control, supplements etc.

- ❖ Identifying and calculating nutritive values of raw, cooked and packed food
- ❖ Scrutinizing sport nutrition related information available on internet
- ❖ Basic understanding of Exercise biochemistry and its application in sports
- ❖ To instruct more about the use of biochemical parameters in understanding the sports training related adaptations
- ❖ Basic idea about exercise metabolism, fuel utilization during exercise.
- ❖ To elucidate the mechanisms of fatigue and best recovery modes during different exercise protocols

LEARNING OUTCOMES

- ❖ At the end of course the coaches will be able to understand the principles of nutrition to maintain health and enhance recovery process
- ❖ The coaches will also be able to apply the nutrition knowledge into field situations
- ❖ Better understanding about the application of exercise biochemistry for health and nutritional monitoring of athlete
- ❖ Coaches will get clear picture about the importance of biochemical parameters in monitoring the adaptations of sports training,

DETAILED SYLLABUS - SEMESTER I					
THEORY PAPER					
Unit No	**Description/Topics Covered**	**Teaching Method**	**No. of Hours (Period)**	**Online /Class room**	**Faculty Description**
1	Sports Biochemistry: Definition, Aim and importance, Exercise Metabolism (Anabolism and Catabolism)		01		
	Storage of fuels in the body, relevance of carbohydrates and lipids for sports and Exercise.		01		
	Glycolysis (aerobic and anaerobic), glycogen and lactic acid metabolism		01		
	Factors affecting fuel utilization during the exercise.		01		
	Biochemical basis of fatigue		01		
	Recovery modes		01		
2	Proteins that transport/store oxygen: Haemoglobin and Myoglobin		01		
	Anaemia: Definition, prevalence and types (Iron deficiency anaemia, and sports anaemia)		01		
	Importance of Biochemical monitoring of athletes during Sports training: Nutritional markers, Muscle damage markers Bone health markers Metabolic markers Hormonal markers Inflammatory markers		03		
	Biochemical adaptations during sports training		02		
	Overtraining and biochemical markers of overtraining		01		

	Vitamin D and its effects on skeletal muscle and athletic performance		01		
3	**Digestive System** Elementary canal- structure and functions Accessory organs- Structure and functions		01		
	Carbohydrates Types of carbohydrates Digestion and absorption of carbohydrates Sources of carbohydrates and their role in sports Requirement of carbohydrates based on training load Requirement for pre during and post competition		01		
	Proteins Dietary proteins and their role in sports Digestion and absorption of proteins Amino acids and their role in sports Requirement of Proteins for different sports Requirement of proteins for recovery post training/competition		01		
	Fats Types of fatty acids, sources and their role in sports Digestion and absorption of Fats Requirement of fats for different sports		01		
	Minerals Iron: Food sources and role in sports Calcium: Food sources and role in sports Other minerals: Food sources and role in sports		01		

5	**<u>Vitamins</u>** Fat and water-soluble vitamins- Introduction Digestion and absorption of vitamins Role of different vitamins in sports and their food sources		01		
	Other health components Healthy eating habits for at athlete Phytochemicals, antioxidants, probiotics and prebiotics- Definition, food sources and role in sports General Nutritive values of standard food groups		01		
	<u>Hydration</u> Importance of hydration Symptoms of dehydration Guidelines for fluid and nutrient intake to maintain hydration status		01		
	<u>Weight management</u> • Weight loss 1. Methods of crash weight reduction and their harmful effects 2. Guidelines for healthy weight reduction • Weight gain		01		
	Nutritional supplementation for performance enhancement • Sports food • Supplements for performance enhancement • Supplements for immunity, recovery, rehabilitation and weight loss		01		
Total hours: 25					

DETAILED SYLLABUS - SEMESTER I

PRACTICAL(BIOCHEMISTRY)

Practical / Assignments	Topic	Classes (2 hours each)
Practical 1	Estimation of hemoglobin	**1**
Practical 2	Estimation of blood Lactate	**1**
Assignment	Interpretation of biochemical reports	**1**

DETAILED SYLLABUS - SEMESTER I

PRACTICAL(NUTRITION)

Practical / Assignments	Topic	Classes (2 hours each)
Practical	Use of food composition tables: Reading and calculations	1
Practical	Athlete food plate: Uses and practical applications	1
Case study	Assessment of hydration status, Calculation of sweat rate and percent dehydration, preparation of sports drink	1
Case study	Weight loss Competition meal	1
Assignment	Reading food labels for selection of packed food/ supplements	1
Assignment	Searching relevant scientific information on internet for critical evaluation of fad diets/supplements	1

Quiz/ Internal test	Quiz on different topics	1

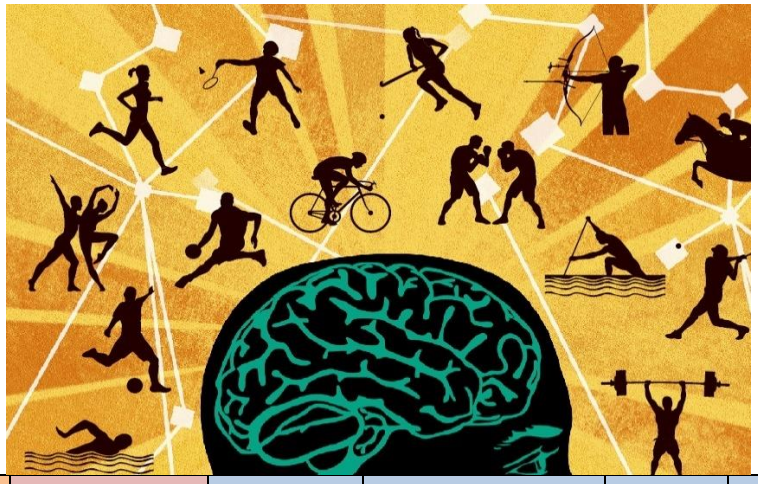
Internal assessment: 30 Marks
External assessment: 70 Marks

Total Number of classes for nutrition
Theory: 10 Hours
Practical: 14 Hours

Total Number of classes for biochemistry
Theory: 15 Hours
Practical: 6 hours

ASSESSMENT			
Semester	**Theory/ Practical**	**Internal (Total Marks: 30)**	**External (Total Marks: 70)**
BIOCHEMISTRY			
SEMESTER 1/2	**THEORY**	Quiz- 2*5= 10 Marks	Written Examination
	PRACTICAL	Practical: 2*1= 2 Marks Assignment 1*3=3 Marks	
NUTRITION			
SEMESTER 1/2	**THEORY**	Quiz- 1*3= 3 Marks	Written Examination
	PRACTICAL	Practical: 2*1= 2 Marks Assignment 2*2.5=5 Marks Self Work (Case study): 2*2.5= 5 Marks	

SYLLABUS FOR DIPLOMA IN SPORTS COACHING COURSE
DISCIPLINE: SPORTS PSYCHOLOGY **COURSE CODE:**



Total Credits:01	Semester - I	L	Assignment	P/FW	SW	TOTAL CREDIT UNITS
						02
		(L-Lecture, P-Practical,SW-Self Work, FW-Field Work)				

COURSE OBJECTIVES

- To demonstrate understanding of theoretical foundation of the psychological processes that influence human performance in

Sports settings.

- ❖ To identify and apply psychological techniques and strategies to enhance performance in Sports.
- ❖ To evaluate research in Sport Psychology and psychological factors related to performance and participation in Sport and Exercise settings.

LEARNING OUTCOMES

- ❖ To enable the coaches to develop an understanding of various psychological traits and mental states of individual players in different situations.
- ❖ To inculcate in them the confidence to apply appropriate psychological tools and techniques on players according to their needs and requirements.
- ❖ To develop in them the interest and curiosity to be aware of themselves and their athletes and to nurture the athlete in a manner as to bring out their best potential.
- ❖ Evaluate the effectiveness of their work with athletes in Sport, Exercise, and Performance Psychology

DETAILED SYLLABUS – SEMESTER I					
THEORY PAPER					
Unit No	**Description/Topics Covered**	**Teaching Method**	**No. of Hours (Period)**	**Online /Class room**	**Faculty Description**
1	**Sports Psychology: Concept, Processes and Applications in Sports**		08		
	I. Definition and Overview of Sports Psychology, Predominant models of sports psychology and scope of sports psychology. **II. Cognitive Processes in sports: Meaning and types of cognitive processes** • Attentional Styles in Sports • Techniques for building concentration • Role of Thinking in Sports III. **Emotional Processes in Sports** • Definition of emotions • Stress, Anxiety and Aggression in Sports • Emotional regulation in Sports IV. **Arousal-performance relationship in sports** • Theories of Arousal-performance relationship and their application in sports. • Techniques of arousal regulation		02 02 02 01 01		Ms. Reena Ms. Mugdha Sh. Deepak
2	**Psychological factors for performance enhancement**		06		

	I. Motivation • Types of Motivation • Techniques of Motivational enhancement II. Goal setting - Reena • Types of Goals • Principles of Effective Goal setting • Advantages of goal setting III. Psychological Preparation for sports competitions Stages and psychological skills training for sports competitions (PST) - Mugdha		01 01 02 02		Sh. Deepak Ms. Reena Ms. Mugdha
3	**Optimizing Team behavior and Performance**		06		
	I. Difference between Team and Group: • Stages of Team Formation II. Building team cohesiveness: • Types of team cohesion • Measurement of team cohesion • Enhancing team cohesion		03 01 01 01		Ms. Reena Sh. Deepak
4	Application of Positive Psychology for Excellence in Sports Concept of Positive Psychology		06		
	I.Maslow's Need Hierarchy Theory and its application in Sports II.Flow State • Concept, characteristics and application of Flow State in sports III.Optimizing psychological mindset of athletes • Mental Toughness Training - • Ideal Performance State		02 02 01 01		Ms. Mugdha Ms Reena
Total hours: 26					

DETAILED SYLLABUS - SEMESTER I

PRACTICAL PAPER

S No.	SPORT PSYCHOLOGY PRACTICALS	Teaching Hours
1.	Progressive Muscular Relaxation	2
2.	Autogenic Training	2
3.	Systematic Desensitization	2
4.	Biofeedback and HRV Breathing	2
5	Imagery Training	2
6.	Performance Profiling of athletes	2
7.	Vision Board Construction	2
8	Essentials of Psychological Counseling	2
9.	Field Work (Learning Test Administration, Scoring, Interpretation and collecting data on field)	8
10.	Practicum(Designing and preparing Project Report)	6
Total Hours - 30		

DISCIPLINE: DYNAMICS COURSE CODE:

Total Credits:02	Semester - I	L	Assignment	P/FW	SW	TOTAL CREDIT UNITS
						02
		(L-Lecture, P-Practical,SW-Self Work, FW-Field Work)				

COURSE OBJECTIVES

- To provide the knowledge and understanding of Coaching Concepts in sports coaching.
- To enable the trainee Coaches to do self-reflection and work out the coaching effectiveness and philosophy for each individual coach.
- To make the trainee Coaches aware of the behavior and relationships required for becoming effective Coaches.

LEARNING OUTCOMES

- ❖ The trainees will be able to approach sports coaching with their own philosophy.
- ❖ The trainees will be able to differentiate between teaching and coaching and will be aware of the basic principles of Coaching.
- ❖ To develop the understanding of the Coaching process and to be able to carry out athlete managements and developments.
- ❖ To acquire the knowledge of planning coaching sessions.

DETAILED SYLLABUS - SEMESTER I					
THEORY PAPER					
Unit No	**Description/Topics Covered**	**Teaching Method**	**No. of Hours (Period)**	**Online /Class room**	**Faculty Description**
1	**Foundation of Sports Coaching** Coaching Definitions Motivation to become a Professional Coach Approaches to Sports Coaching Qualities of a Good Coach Roles of a Coach	L A	03 01	Online	Cmde PK Garg
	Coaching Philosophy Developing your Coaching Philosophy Determining your Coaching Objective.	L	04	Online	Dr. Pallabh Dasgupta
2	**Principles of Coaching** **A) Foundations of Skill Instruction** • Basics of Good Teaching/Coaching • Differences between Learning and Performing	L/T	03	Online	Dr. Narendra Gangwar

	• Three Basic Ingredients of Skill Instruction • Process-Focused Approach to Providing Sport Skill Instruction • Learning Aids **B) Technical & Tactical Skills** **C) Traditional Approach** • Overemphasis on technical skills and direct instruction **D) The Games Approach** • How it works E) **Fundamentals of coaching process skills** • Safety, risk assessment, organisation, explanation, demonstration, observation, analysis and feedback		04 04 04 02		
4	**Behaviour & Relationships** **A) Managing your Athletes behaviour** • Positive Discipline • Preventive Discipline • Corrective Discipline **B) Coaching Relationships** • Coach-Parent Relationship • Coach-Athlete Relationship • Coach relationship withEducation Providers	L L L	03 04 02	Online	Dr. Narendra Gangwar

5	**Coaching Effectiveness** • Definition and meaning of Coaching Effectiveness • Coaching effectiveness comparisons • Approaches to Coaching effectiveness.	L	03	Online	Ms Poonam Beniwal
6	**Planning Coaching Sessions** **A) Steps to Planning** Step 1 - Identify the skills Step 2 - Know your athletes Step 3 - Analyze your situation Step 4 - Establish priorities Step 5 - Select the methods Step 6 - Plan practices **B) Working with the Sports Science Team**	L P	02 04	Online And Practical	Ms Poonam Beniwal
Total hours: 12					

Training Books, Journals, Online Resources Prescribed for Trainees
17. Rainer Martens (2012), Successful Coaching, Human Kinetics, 4th ed. 18. Ralph Pim (2010), Perfect Phrases for Coaches, By TheMcgraw-Hill Companies, 19. Tania Cassidy, Robyn Jones And Paul Potrac (2008), Understanding Sports Coaching Aylor & Francis E-Library. 20. Robyn L. Jones (2006), The Sports Coach as Educator, Taylor & Francis E-Library. 21. John Lyle (2005), Sports Coaching Concepts, Taylor & Francis E-Library. 22. Anita Navin - Sports Coaching- A Reference Guide for Students, Coaches and Competitors, The Crowood Press Ltd, e edition published in 2011 23. Various e resources

Assessments:

Maximum Marks- 100

Theory Examination - 60

Internal Assessment - Total 40 marks

Quiz at the end of each Unit - 5 Quiz (20 marks)

Assignments during the Course - 2 (20 marks)

DIPLOMA IN SPORTS COACHING COURSE 2020-21

ASSESSMENT CRITERIA FOR DIFFERENT SPORTS SCIENCE SUBJECTS

- Strength & Conditioning
- Exercise Physiology
- Sports Biomechanics
- Sports Anthropometry
- Biochemistry and Nutrition
- Sports Medicine
- Sports Psychology

ASSESSMENT			
SEMESTER	**THEORY/PRACTICAL**	**INTERNAL (30 Marks)**	**EXTERNAL MARKS (70 Marks)**
STRENGTH AND CONDITIONING			
Semester1st	Theory	• 1st MCQ test (after completion of units 1-3)-**06 marks(1*6)**	Written/online examination
		• 2nd MCQ test (after completion of units 4-6)-**07marks(1*7)**	
		• 3rd MCQ test (after completion of units 7-9)-**07marks(1*7)**	
	Practical	• Practical viva-voce (after completionof the syllabus)-**10 marks**	
SPORTS & EXERCISE PHYSIOLOGY			
Semester1st	Theory	• 1st MCQ test (after completion of 1st unit)- **08 marks (1*8)**	Written/online examination
		• 2nd MCQ test (after completion of 2nd unit)- **08 marks (1*8)**	
		• 3rd MCQ test (after completion of 3rd unit)-**08 marks (1*8)**	
	Practical	• Practical viva-voce (after completion	

		of the syllabus)-06 marks **(1*6)**	
SPORTS BIOMECHANICS			
Semester 1st	Theory	• 1st MCQ test (after completion of 1st and 2nd units)- **08 marks (1*8)**	Written/online examination
		• 2nd MCQ test (after completion of 3rd, 4th & 5th units)- **08 marks (1*8)**	
		• 3rd MCQ test (after completion of 6 - 10 units)- **08 marks (1*8)**	
	Practical	• Practical viva-voce (after completionof the syllabus)-06 marks **(1*6)**	
SPORTS ANTHROPOMETRY INTERNAL (TOTAL MARKS=15, 1 CREDIT)			
Semester2nd	Theory	• 1st MCQ test (after completion of 1st & 2nd unit)- **04 marks (1*4)**	Written/online examination
		• 2nd MCQ test (after completion of 3rd & 4th unit)- **04 marks (1*4)**	
	Practical	• Practical viva-voce (after completionof the syllabus)-07 marks **(1*7)**	
SPORTS BIOCHEMISTRY			
Semester2nd	Theory	Quiz MCQ after the completion of each chapter- 2*5= 10 Marks	Written/ online examination
	Practical	Practical: 2*1= 2 Marks	
	Assignment	Assignment 1*3=3 Marks	
SPORTS NUTRITION			
Semester2nd	Theory	Quiz- 1*3= 3 Marks	Written/ online examination
	Practical	Practical: 2*1= 2 Marks	
	Assignment	Assignment 2*2.5=5Marks	
	Self work (case study)	Self work (case study)2*2.5=5 marks	
SPORTS MEDICINE			
Semester1st	Theory		
		1st MCQ test (after completion of 1std unit)-5marks 2st MCQ test (after completion of 2std unit)-5 marks 3st MCQ test (after completion of	Written/ online examination

		3std unit)-5 marks 4st MCQ test (after completion of 4std	

		unit) 5 marks	
	Practical	MCQ/ Quiz-10 marks	
	SPORTS PSYCHOLOGY		
Semester 2nd	Theory	• 1st MCQ test (after completion of 1st and 2nd units)- **05marks**	Written/ online examination
		• 2nd MCQ test (after completion of 3rd, 4th units)- **05 marks**	
	Self work (casestudy)	Self work (case study)2*2.5=5 marks	
	Assignment	Assignment 2*2.5=5Marks	
	Practical	• Practical viva-voce (after completion of the syllabus)-10 marks	