



UNIVERSITY OF SARGODHA  
OFFICE OF THE REGISTRAR  
(ACAD BRANCH)

NOTIFICATION

On the recommendations of Academic Council made in its 19<sup>th</sup> (4/2023) meeting held on 13.09.2023, the Syndicate in its 64<sup>th</sup> (4/2023) meeting held on 03.11.2023 has approved the revised curriculum of BS in Physical Education (5<sup>th</sup> Semester Intake) for implementation w.e.f. **Fall 2025** (Annex-'A').

  
(WAQAR AHMAD)

Additional Registrar (General)

Dated: 14.11.2025

No. SU/Acad/25/ 1242

Distribution:

- Incharge, Department of Sports Sciences
- Controller of Examinations
- Director Academics

C.C:

- Director, QEC
  - Additional Registrar (A & R) *{With the request to forward the notification alongwith curriculum to all Principals of affiliated colleges concerned}*
  - Secretary to the Vice-Chancellor
  - PA to Registrar
- Notification File

**CURRICULAM OF BS PHYSICAL  
EDUCATION  
(5<sup>th</sup> Semester Intake)  
2 YEARS PROGRAM  
W.E.F FALL 2025**



**DEPARTMENT OF SPORTS SCIENCES  
Faculty of Arts and Humanities  
University of Sargodha**

**BS  
PHYSICAL  
EDUCATION**

**5<sup>th</sup>  
SEMESTER  
INTAKE**

*222*


## OVERVIEW

Sports Science is a dynamic & multi-directional subject as an academic discipline has scientific aspects and covers a broad range of fields associated to it. Such as Human Physiology, Psychology and Biomechanics, and their relation-ship to sports performance at local, national and at international sports area health and well-being. The Department of Sports Sciences is promoting sports leadership, teamwork and ethics, and provides student's opportunities to design and enhance the intellectual assets and moral values required to lead meaningful applicable knowledge lives while impacting society in respectful ways.

The Department was established in 2009 and renamed in 2012 as the Department of Sports Sciences. The Department is presently offering in the discipline of Physical Education. The program emphasizes scientific academics preparation combined with practical & playfield experiences, coaching techniques and knowledge of analysis of Human Sports Performance in Laboratory Environment (HSPLA).

The Department has five experienced MPhil and one MSc qualified faculty members while many qualified visiting professionals encourage our students for applied research in the area of Human Anatomy, Exercise Physiology, Sports Psychology, Sports Nutrition, Bio-Mechanics and the Techniques of Scientific Coaching by using the latest technology to improve the sports performance & knowledge.

The Department envisages preparing professionally innovative sports leaders, administrators, managers, coaching player, fitness instruction, teacher, scholars & sports scientist capable of addressing the challenges being faced by the national sports-organizations and educational instructions in the country



**BS PHYSICAL EDUCATION (5th Semester Intake)**

**Eligibility:** At least 45% marks in Graduation or equivalent - Qualify Physical Efficiency Test

**Duration:** 02 Year Program (04 Semesters)

**Total Credit Hours:** 64

**2. General Education Requirements: (Mandatory / Core Courses, minimum 30 credit hours):**

Sr. #	Semester	Course Code	Course Title	Credit Hours	Prerequisite
1.	I	URCG-5129 / URCG-5131	Understanding of Holy Quran I or Ethics I	1 (0-1)	Nil
2.	III	URCG-5130 / URCG-5132	Understanding of Holy Quran II or Ethics II	1 (0-1)	Nil
<b>General Education Courses Cr. Hours Total</b>				<b>02</b>	

**3. Single Major Courses**

Sr. #	Semester	Course Code	Course Title	Credit Hours	Prerequisite
1.	I	PEDU-6414	Research Methodology in Physical Education	3 (3-0)	Nil
2.	I	PEDU-6415	Science of Sports Training	3 (3-0)	Nil
3.	I	PEDU-6416	Practical Athletics (Middle & Long Races)	2 (0-2)	Nil
4.	I	PEDU-6417	Practical Games (Foot Ball & Basket Ball)	2 (0-2)	Nil
5.	II	PEDU-6418	Scientific Coaching	3 (3-0)	Nil
6.	II	PEDU-6419	Curriculum Development in Physical Education	3 (3-0)	Nil
7.	II	PEDU-6420	Sports Administration and Management	3 (3-0)	Nil
8.	II	PEDU-6421	Practical Athletics (Sprint Races)	2 (0-2)	Nil
9.	II	PEDU-6422	Practical Games (Table Tennis, Badminton)	2 (0-2)	Nil
10.	III	PEDU-6424	Sports Psychology	3 (3-0)	Nil
11.	III	PEDU-6425	Test, Measurement & Evaluation in Sports	3 (3-0)	Nil
12.	III	PEDU-6426	Exercise Physiology	3 (3-0)	Nil
13.	IV	PEDU-6427	Sports Nutrition	3 (3-0)	Nil
14.	IV	PEDU-6428	Sports Biomechanics	3 (3-0)	Nil
15.	IV	PEDU-6429	Sports Injuries & Rehabilitation	3 (3-0)	Nil
16.	IV	PEDU-6430	Practical Hiking & Hill Tracking	2 (2-0)	Nil
17.	IV	PEDU-6431	Practical Athletics (Javelin and Hammer)	2 (0-2)	Nil
18.	IV	PEDU-6432	Minor Area Games	2 (0-2)	Nil
<b>Major Courses Cr. Hours Total</b>				<b>47</b>	

**4. Interdisciplinary/Allied courses: minimum 12 credit hours:**

Sr. #	Semester	Course Code	Course Title	Credit Hours	Prerequisite
1	I	COMS-5131	Sports Communication	3 (3-0)	Nil
2	I	PHYS-5161	Physics	3 (2-1)	Nil
3	II	STAT-5101	Introductory Statistics	3 (3-0)	Nil
4	III	URDU-5102	Functional Urdu	3 (3-0)	Nil
<b>Interdisciplinary/ Allied Courses Credit Hours Total</b>				<b>12</b>	

**5. List of Deficiency Courses**

Sr. #	Semester	Course Code	Course Title	Credit Hours	Prerequisite
1.	I	PEDU-6433	Basic Human Anatomy	3 (3-0)	Nil
2.	I	PEDU-6434	Science of Track & Field	3 (3-0)	Nil
3.	II	PEDU-6435	Theory of Games	3 (3-0)	Nil
4.	II	PEDU-6436	Sports Medicine	3 (3-0)	Nil
5.	III	PEDU-6437	Practical Games (Volley Ball & Hand Ball)	2 (0-2)	Nil
6.	IV	PEDU-6438	Athletics (Jumps & Throws)	2 (0-2)	Nil
<b>Deficiency Courses Credit Hours Total</b>				<b>16</b>	

**6. Capstone project: Minimum 03 credit hours:**

Sr. #	Semester	Course Code	Course Title	Credit Hours	Prerequisite
1.	III	PEDU-6425	Capstone Project	3 (3-0)	Nil

**7. Summary:**

Sr. #	Category	No. of Courses	Credit Hours
1	General Courses	02	02
2	Subject Major Courses	18	47
3	Allied/ Interdisciplinary Courses	04	12
4	Capstone Project	01	03
5	Deficiency Courses	06	16
<b>Total</b>		<b>31</b>	<b>65</b>

- Deficiency Courses Credit Hours Not be Counted in Degree

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**Semester 1**

URCG-5129 / URCG-5131	Understanding of Holy Quran I or Ethics I	1 (0-1)	GE-01
COMS-5131	Sports Communication	3 (3-0)	ID-1
PHYS-5161	Physics	3 (2-1)	ID-2
PEDU-6414	Research Methodology in Physical Education	3 (3-0)	Major-1
PEDU-6415	Science of Sports Training	3 (3-0)	Major-2
PEDU-6416	Practical Athletics (Middle & Long Races)	2 (0-2)	Major-3
PEDU-6417	Practical Games (Foot Ball & Basket Ball)	2 (0-2)	Major-4
PEDU-6433	Basic Human Anatomy	3 (3-0)	Deficiency 1
PEDU-6437	Practical Games (Volley Ball & Hand Ball)	2 (0-2)	Deficiency 2
Semester Total Credit Hours: 17			

**Semester 2**

STAT-5101	Introductory Statistics	3 (3-0)	ID-3
PEDU-6418	Scientific Coaching	3 (3-0)	Major-5
PEDU-6419	Curriculum Development in Physical Education	3 (3-0)	Major-5
PEDU-6420	Sports Administration and Management	3 (3-0)	Major-7
PEDU-6421	Practical Athletics (Sprint Races)	2 (0-2)	Major-8
PEDU-6422	Practical Games (Table Tennis, Badminton)	2 (0-2)	Major-9
PEDU-6434	Science of Track & Field	3 (3-0)	Deficiency 3
PEDU-6438	Athletics' (Jumps & Throws)	2 (0-2)	Deficiency 4
Semester Total Credit Hours: 16			

**Semester 3**

URCG-5130 / URCG-5132	Understanding of Holy Quran II or Ethics II	1 (0-1)	GE-02
URDU-5102	Functional Urdu	3 (3-0)	ID-4
PEDU-6423	Capstone Project	3 (3-0)	Compulsory
PEDU-6424	Sports Psychology	3 (3-0)	Major-10
PEDU-6425	Test, Measurement & Evaluation in Sports	3 (3-0)	Major-11
PEDU-6426	Exercise Physiology	3 (3-0)	Major-12
PEDU-6435	Theory of Games	3 (3-0)	Deficiency 5
Semester Total Credit Hours: 16			

**Semester 4**

PEDU-6427	Sports Nutrition	3 (3-0)	Major-13
PEDU-6428	Sports Biomechanics	3 (3-0)	Major-14
PEDU-6429	Sports Injuries & Rehabilitation	3 (3-0)	Major-15
PEDU-6430	Practical Hiking & Hill Tracking	2 (2-0)	Major-16
PEDU-6431	Practical Athletics (Javelin and Hammer)	2 (0-2)	Major-17
PEDU-6432	Minor Area Games	2 (0-2)	Major-18
PEDU-6436	Sports Medicine	3 (3-0)	Deficiency 6
Semester Total Credit Hours: 15			

# Semester-I

## Semester I

URCG-5129 / URCG-5131	Understanding of Holy Quran I or Ethics I	1 (0-1)	GE-01
COMS-5131	Sports Communication	3 (3-0)	ID-1
PHYS-5161	Physics	3 (2-1)	ID-2
PEDU-6414	Research Methodology in Physical Education	3 (3-0)	Major-1
PEDU-6415	Science of Sports Training	3 (3-0)	Major-2
PEDU-6416	Practical Athletics (Middle & Long Races)	2 (0-2)	Major-3
PEDU-6417	Practical Games (Foot Ball & Basket Ball)	2 (0-2)	Major-4
PEDU-6433	Basic Human Anatomy	3 (3-0)	Deficiency 1
PEDU-6437	Practical Games (Volley Ball & Hand Ball)	2 (0-2)	Deficiency 2
			Semester Total Credit Hours: 17

## Model Course Outline for the Course Understanding of Quran – I

**Course Title:** Understanding of Quran – I

**Course Book:** Muallim ul Quran (Volume 1, 2 & 3) by Dr Ubaid ur Rahman

**Credit Hours:** 1 (0-1)

**Contact Hours:** 3 per week

**Weeks:** 15-16 (45-48 hours)

### Course Learning Outcomes:

*By the end of this course, students will be able to:*

1. Develop the ability to understand basic words of the Quran, phrases and sentences that do not contain verbs (unit 1 to 5 of Muallim ul Quran Book) and then sentences having present tense (first half of unit 6 of Muallim ul Quran Book).
2. Acquire a strong foundation for understanding long verses of the Quran with clarity.
3. Comprehend Quranic vocabulary, particles (operative & non operative particles) , compounds (Adjective & Possessive compound), pronouns (singular & plural) and types of plural through hundreds of Quranic sentences.
4. Recognize and understand different styles of Quranic sentences, including nominal sentence, emphatic sentence, double emphatic sentence, negative sentence, interrogative sentence, oath –based sentences.
5. Strengthen understanding of fundamental Quranic linguistic styles, expressions and idioms.
6. Understand at least 30 to 40 % of each page of the holy Quran.

### Provision of material, content and books:

- **Paper book:** All volumes are available in printed book form.
- **Tutorial videos:** Teaching video of each lesson available on YouTube.
- **Confirmation Videos:** A complete series of confirmation videos of all lessons is available in which the student can confirm his answers.
- **A flipbook:** A flipbook edition is also accessible.
- **Helping material:** Helping material for the teachers like quizzes, question papers and images is available on website.

**Course Outline:**

Weeks	Lectures (1.5 hrs)	Units	Lessons	Assignments/Home Task	Linguistic Rules
1.	1.	1	1-6	Writing the meaning of Quranic words Lesson 1-8	Proper Noun Masculine & Feminine
	2.	1	9-14	Writing the meaning of Quranic words 9-14	Two kinds of plural Concept of (و) "And" Common Noun
2.	1.	1	15-17	Writing the meaning of Quranic words, phrases & translation of Sentences 15-17	Demonstrative Noun (This & That for Masculine (هذه - هذا) Demonstrative Noun (This & That for Feminine) (ذلك - تلك)
	2.	1	18-19 & Revision (Unit 1)	Writing the meaning of Quranic words , phrases & translation of Sentences 17-19 Quiz	Laam for emphasis (لام التأكيد) Superlative Degree like أكبر Revision of all Quranic Sentences
3.	1.	Unit 2	1-3	Writing the meaning of Quranic words, phrases & translation of Sentences 1-3	Emphatic Particle ان Preposition "For" (اللام) Preposition (في)
	2.	2	4-6	Writing the meaning of Quranic words, phrases & translation of Sentences 4-6	Preposition (على - من - إلى)
4.	1.	2	7-9	Writing the meaning of Quranic words & translation of Sentences 7-9	Preposition (الباء) Absolute Negation Particle Exceptive Particle ( لا النافية ) (إلا) (ما النافية) (للجنس)
	2.	2	10-13 & Revision (Unit 2)	Writing the meaning of Quranic words, phrases & translation of Sentences 10-13 Quiz	Subordinating Conjunction (أن), Was (كان), Vocative Particle (حرف النداء)

5.	1.	Unit 3	1-2	Writing the meaning of Quranic phrases 1-2	Quranic Adjective Compounds (صفة وموصوف)
	2.	3	3-5	Writing the meaning of Quranic phrases & translation of sentences 3-5	Quranic Possessive Construction (مضاف ومضاف إليه)
6.	1.	3	6-7	Writing the meaning of Quranic phrase translation of sentences 6-7	Quranic Possessive Construction (مضاف ومضاف إليه)
	2.	3	8-10 & Revision (Unit 3)	Writing the meaning of Quranic phrase & translation of sentences 8-10 Quiz	Active Participle (اسم الفاعل), Passive Participle (اسم المفعول), Dual (مثنى)
7.	1.	Unit 4	1-2	Writing the meaning of Quranic phrase & translation of sentences 1-2	Personal Pronoun He (هو المنفصل) Possessive Pronoun His (المتصل)
	2.	4	3-4	Writing the meaning of Quranic phrase & translation of sentences 3-4	Possessive Pronoun with prepositions like في بيته Pronoun "His" with prepositions like له، منه، فيه
8.	1.	4	5-8	Writing the meaning of Quranic sentences 5-8	Personal Pronoun You (أنت المنفصل) Possessive Pronoun Your (المتصل) Possessive Pronoun with prepositions like في بيتك Pronoun "your" with prepositions like لك، منك، فيك
	2.				

Mid Term

9.	1.	4	9-12	Writing the meaning of Quranic phrases & sentences 9-12	Personal Pronoun She( هي المنفصل) Possessive Pronoun Her ها المتصل) Possessive Pronoun with prepositions like في بيتها Pronoun "Her" with prepositions like لها،
	2.	4	13-16	Writing the meaning of Quranic phrases & sentences 13-16	Personal Pronoun I ( أنا المنفصل) Possessive Pronoun Her ي المتصل) Possessive Pronoun with prepositions like في بيتي Pronoun "My" with prepositions like لي
10.	1	4	17 & Revision Unit 4	Revision of all Quranic sentences of Unit 4 Quiz	Adverb (حال)
	2.	Unit 5	1-2	Writing the meaning of Quranic phrases & sentences 1-2	Masculine Plural جمع المذكر السالم و جمع المذكر السالم المسبوق بحرف الجر
11.	1.	5	3-4	Writing the meaning of Quranic phrases & sentences 3-4	Possessive Construction with Plurals جمع المذكر السالم المسبوق بالإضافة
	2.	5	5-6	Writing the meaning of Quranic phrases, sentences & verses 5-6	Personal Pronoun They ( هم المنفصل) Possessive Pronoun Their هم المتصل)
12.	1.	5	7-8	Writing the meaning of Quranic phrases, sentences & verses 7-8.	Possessive Pronoun with prepositions like في بيتهم Pronoun "Their" with prepositions like لهم
	2.	5	9-11	Writing the meaning of Quranic phrases, sentences & verses 9-11	Personal Pronoun You ( أنتم المنفصل) Possessive Pronoun Your كم المتصل) Possessive Pronoun with prepositions

13.	1.	5	12-14	Writing the meaning of Quranic phrases & sentences & verses 12-14	like في بيتكم Pronoun "Your" with prepositions like لكم Personal Pronoun We ( نحن المنفصل) Possessive Pronoun Our نا المتصل)
	2.	5	15-16	Writing the meaning of Quranic sentences & verses 15-16	Possessive Pronoun with prepositions like في بيتنا Pronoun "Our" with prepositions like لنا
14.	1.	5	17-18	Writing the meaning of Quranic sentences & Verses 17-18	Demonstrative Pronoun These, Those ( هؤلاء- أولئك )
	2.	5	19-23	Writing the meaning of Quranic sentences & Verses 19-23	ما / إلا، إن / إلا، إنما، ليس، ما ، ( أ/أم، أن، بل، كأن ) ألا، أليس، اليوم، يومئذ، سبحان، ما بينهما، قل، إذن، بنس، نعم، كلا، ما أدراك، حسب، أعلم ب، مصير، مرجع، ديننا(تميز)
15.	1.	5	Revision Unit 5	Quiz	
	2.	5	1-3 (till Page 16)	Writing the meaning of Quranic Verbs & Translation of Quranic Sentences & Verses (1-3)	Introduction of Present Tense (فعل مضارع) & Verbal Sentence (جملة فعلية) Present Tense الفعل المضارع صيغة المفرد يعلم
16.	1.	6	3 (From Page 17) & 4-5	Translation of Quranic Sentences & Verses 3-5	Present Tense الفعل المضارع صيغة المفرد يعلم
	2.	6	6	Translation of Quranic Sentences & Verses	Present Tense الفعل المضارع صيغة الجمع يعلمون

**1-Course Description**

The Ethics-I course is designed to provide students with a comprehensive understanding of ethical principles, practices, and theories in various societal contexts. Throughout this degree program, students will explore the complexities of ethical theories of semitic and non-semitic religions along with decision-making and develop critical thinking skills to navigate moral dilemmas. This course will also enable the students to interact with others religious identities with humanistic, inclusive and holistic approach

**2- Learning Objectives**

This course aims to:

1. Introduce students to the fundamental concepts, scope, and importance of ethics.
2. Explore the relationship between law, morality, and social values.
3. Develop a clear understanding of virtuous and immoral ethics and their impact on individual and collective life.
4. Study the role of major religious figures in the moral development of human society and enable students to apply ethical principles for personal development, conflict resolution, and social harmony.

**3- Learning Outcomes**

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

1. Students will be able to identify and analyze major ethical theories, values, and their scope in social and individual life.
2. Differentiate between law and ethics, and analyze their interrelationship.
3. Identify types of virtuous and immoral ethics and assess their social impacts.
4. Examine the ethical teachings of major religions and their relevance in contemporary society.
5. Apply ethical principles to address modern challenges in personal and professional life.

**4-Course Structure**

1. Interactive lectures, Group discussions and debates
2. Reflection papers and presentations
3. Assignments and Quiz

**Course Contents****Unit 1: Introduction and Fundamentals of Ethics**

1. Literal and terminological definition of ethics
2. Literal and terminological definition of values
3. Relationship between law and ethics
4. Need, importance, and scope of ethics

**Unit 2: Types of Ethics and Their Impact on Society**

- Virtuous ethics: concept, types, benefits, and outcomes
- Immoral ethics: concept, types, and harms
- Role of ethics in social refinement and establishment of peace

**Unit 3: Virtuous Ethics (Akhlaq-e-Hasanah)**

- Concept, need, and importance of virtuous ethics
- Scope of virtuous ethics in the light of religions
- Major virtues in revealed and non-revealed religions
- Impact of virtuous ethics on individual and collective life

**Unit 4: Immoral Ethics (Akhlaq-e-Razilah)**

- Concept of immoral ethics
- Social problems caused by immoral ethics
- Practical consequences of immoral ethics
- Major vices in revealed and non-revealed religions

**Unit 5: Role of World Religious Figures in Moral Development**

- Prophet Moses (AS): introduction, miracles, and role in moral refinement
- Prophet Jesus (AS): introduction, miracles, and role in moral refinement
- Prophet Muhammad (ﷺ): introduction, miracles, and role in moral refinement

**Textbook**

1. Izutsu, T. (2002). *Ethico-Religious Concepts in the Qur'an*. McGill-Queen's University Press.

**Suggested Readings**

1. Gert, B. (2005). *Morality: Its Nature and Justification*. Oxford University Press.
2. MacIntyre, A. (2007). *After Virtue: A Study in Moral Theory*. University of Notre Dame Press.
3. Al-Ghazali, Abu Hamid (2001). *The Alchemy of Happiness*. Islamic Texts Society.
4. Nasr, S. H. (1994). *The Heart of Islam: Enduring Values for Humanity*. Harper One.
5. Beauchamp, T. L., & Childress, J. F. (2019). *Principles of Biomedical Ethics*. Oxford University Press.
6. Hasan, Z. (2010). *Ethics in Islam: Key Concepts and Contemporary Challenges*. Islamic Research Institute.



Sports communication and marketing offers instruction, analysis, and training in the principles and practice of public relations in sports organizations. Emphasis is on media relations and skills essential for sports communication professionals, including handling media interactions across platforms, problems, crises, and integration of positive communication strategies with strategic goals of sports organizations. After the course, students will be able to demonstrate an understanding of the basic skills necessary to effectively carry out day-to-day responsibilities in sports communications and sports information professions. Students will be able to develop contents, including effective writing, from a sports perspective and effectively integrate communications strategies with a sports organization's goals. Students will be able to distinguish between sports communication perspectives and sports journalism. Students will be able to demonstrate understanding and skills and strategies in handling negative publicity and communication crises in sports organizations. The course will train future athletes, coaches, sports executives and owners to effectively handle media interviews and use of social media to project and market sports. Students will learn basics of sports marketing, sports promotion and publicity.

### Contents

1. Sports Communication and marketing
2. Importance of sports communication for players
3. Public Relations in Sports
4. PR as a management tool, stakeholders and constituents, issue management, organizational reputation
5. Forms of Writing; types of releases in sports events
6. Audience Awareness and common errors in interview skills by the players
7. Planning for sports related coverage in print, electronic and social media
8. Creation and management of social media accounts and pages related to sports
9. Strategies for sports promotion and marketing
10. Early stage of campaign development for sports promotion
11. Nature of sports related crisis; communication strategies for crisis management
12. Global mega events and expanded coverage on traditional and social media
13. Sports branding and promotion
14. Laws related to mainstream media and social media
15. Tools and techniques of trend setting on social media

### Suggested Readings

1. Billings, A.C; Butterworth, M.I; & Turman, P. D. (2012). *Communication and Sport: Surveying the Field (4<sup>th</sup> ed.)*. Sage.
2. Stoldt, G.C; & Dittmore, S.W; Ross. M; & Branvold, S.E. (2021). *Sport Public Relations (3<sup>rd</sup> ed.)*. Human Kinetics.
3. Bernstein, A; & Blain, N. (eds.). (2003). *Sport, media, culture: Global and local dimensions*. Routledge.
4. Heather, L. H., & Billings, A.C. (eds.). (2010). *Examining identity in sports media*. Sage.

Physics is the science of Nature - of matter and energy in space and time. Physics is very dependent on mathematics. Models and theories in physics are expressed using mathematical equations. However, while physics uses mathematics to describe the material world, mathematics may deal with strictly abstract concepts and patterns. There is a large overlap between the two fields.

### *Contents*

1. Vector Analysis
2. Particle Dynamics
3. Work , Power and Energy
4. System of Particles ,
5. Collisions,
6. Waves and Oscillations ,
7. Harmonic Oscillations ,
8. Waves in Physical Media, Sound Light Interface ,
9. Diffraction ,
10. Polarization .

### **Lab-1**

Modulus of rigidity by static and dynamic method (Maxwell's needle, Bartons Apparatus).  
Determination of moment of inertia of a solid/hollow cylinder and a sphere etc.  
To study the conservation of energy (Hook's Law).

### *Recommended Texts*

1. Ser and zemansky, University physics with modern Physics, 12th edi, pearson, 2008.
2. Fundamental of Physics, Jearl walker, 8th edition.
3. Physics, Resnic, Halliday, Krane, 4th edition volume 1 .

### *Suggested Readings*

1. Giancoli, Douglas C, Physics for scientist and Engineers with modern Physics, 2nd edition, Prentice Hall Inc, 1988.
2. Beiser A, concepts of modern physics, 4th edition, McGraw-Hill Book Co, 1987.

This course is a graduate level course of M.Sc. Physical Education. This course will provide students a basic understanding of research objectives, research problems, hypothesis, design, methodologies, instrumentation, statistical procedures, analysis, precision, variables, population and sampling. Enable them to read and interpret research articles, analyse the data presented therein and discover causes and effect relationship of variables, correlation, draw general principles and scientific generalization that can be applied to the solution of a wide range of problems in sports sciences, physical education and recreation nationally and internationally. Students will learn to read and interpret existing research articles, to select appropriate methodologies for a researchable question, and conduct a literature review on a topic of their own interest. The course will also build their foundation to prepare a research proposal while discovering a research gap from available literature including selection of research methods appropriate to meet desired outcomes of their research study.

### **Contents**

1. Introduction of Research
2. Formulation and Selection of Research Problems
3. The Hypothesis
4. Methods of Research Design
5. Experimental Research
6. Methodology
7. Data Collection
8. Data Analysis
9. The Research Report

### **Recommended Texts**

1. Jadhav, K.G., Pagare S.B., & Singh, S.K. (2007). *Research process in physical education & sports: an introduction*. New Delhi, India: Khel Sahitya Kendra Publishers.
2. Thomas, J. R., Nelson, J. K., & Silverman, S. J. (2015). *Research methods in physical activity* (7<sup>th</sup>ed.). Champaign, IL: Human Kinetics.

### **Suggested Readings**

1. Price, M. (2013). *Lab reports and projects in sport and exercise science: A guide for students*. London, UK: Routledge.
2. Bell, J., & Waters, S. (2014). *Doing your research project: A guide for first time researchers* (6<sup>th</sup>ed.). London, UK: McGraw Hill.
3. Veal, A. J., & Darcy, S. (2014). *Research methods in sport studies and sport management: A practical guide*. London, UK: Routledge.
4. Smith, M. F. (2018). *Research methods in sport* (2<sup>nd</sup>ed.). London, UK: Sage Publications.

This course is a graduate level course of M.Sc. Physical Education. Sports training course is designed to improve fitness level for the purpose of improving ability to perform a given sport. It includes corrective and restorative exercise, strength training, conditioning and cardiovascular training, sports specific techniques and drills, periodization, nutritional advice, mental and psychological training, and monitoring by a qualified trainer. The main aim of sports training is to improve the performance of athletes and is the most important aspect of Physical Education. The purpose of sports training is to achieve the highest possible sports result for a given individual. Training is efficient if this result is achieved with a minimal expenditure of time and energy. In accordance with the above statements, Science of Sports Training tells the reader how to achieve maximal results with minimum of effort. The purpose of athletic training is to achieve the highest possible sports result for a given individual. Training is efficient if this result is achieved with a minimal expenditure of time and energy.

### ***Contents***

1. Physical Fitness
2. Components of physical fitness
3. The Endurance Abilities
4. The Strength Abilities
5. The Speed Abilities
6. Flexibility
7. Psychological Training
8. Body Composition
9. Training Method
10. Training principles

### ***Recommended Texts***

1. Joyce, D. (2014). *High-performance training for sports* (2<sup>nd</sup>ed.). Champaign, IL: Human Kinetics.
2. Prentice, W. E. (2017). *Principles of athletic training: A competency-based approach* (16<sup>th</sup>ed.). Vancouver, B.C: Langara College.

### ***Suggested Readings***

1. Konin, J. G., & Ray, R. (2019). *Management strategies in athletic training* (5<sup>th</sup>ed.). Champaign, IL: Human Kinetics.
2. Gibson, A. L., Wagner, D. R., & Heyward, V. H. (2019). *Advanced fitness assessment and exercise prescription* (8<sup>th</sup>ed.). Champaign, IL: Human Kinetics.
3. Lox, C. L., A., M. G., Gainforth, H. L., & Petruzzello, S. J. (2020). *The psychology of exercise integrating theory and practice* (5<sup>th</sup>ed.). New York: Routledge

During course students will develop their running skills as well as their knowledge of the rules equipment and central form of athletics. Compose and perform their routine. Demonstrate knowledge of the principles of particular event and races, they will also develop motor skills and gain the necessary know-how for races. The basis of the knowledge athletes and coaches develop their individual reactions to different training approaches there is adaptation and transformation when training methods are displaced and enacted by different athletes. It also provides the range of tests and techniques for testing Physical fitness, motor abilities and specific sports skills. e.g. (Reaction time, Endurance, Muscular Strength, Flexibility, Balance, Power, Speed, Agility, Coordination, Test criteria, Methods of grading etc. This paper analyses the evolution of training methods in distance running and highlights knowing as a local enactment that involved a process of displacing and transformation the importance of the cardio-vascular functions for the improvement of resistance alongside the use of message, breathing exercises, and appropriate diet.

**Contents:**

1. Introduction/rules and regulations of middle and long distance races
2. General and specific warm-up and cool down exercises.
3. Races with different intensity
4. Resistance Training
5. Starting technique, acceleration and finishing technique.
6. Endurance training (aerobic, anaerobic and work capacity)
7. Strength training (absolute strength, general strength, elastic strength and strength endurance)
8. Speed training (absolute speed, speed endurance, optimal speed)
9. Multi pace training
10. Coordination exercises (agility, mobility, balance, technical execution)
11. Fartlek training
12. Power training
13. Introduction of periodization training
14. Importance of weight training
15. Specification to complete the middle and long distance races
16. Duties of officials and organizing committee

**Recommended Texts**

1. Konin, J. G., & Ray, R. (2019). *Management strategies in athletic training* (5<sup>th</sup>ed.). Champaign, IL: Human Kinetics.
2. Cleary, M., & Flanagan, K. W. (2019). *Acute and emergency care in athletic training*. Champaign, IL, Human Kinetics.

**Suggested Readings**

1. Cartwright, L. A., & Peer, K. (2018). *Fundamentals of athletic training* (4<sup>th</sup>ed.). Kent, state university united states of america. Champaign, IL, Human Kinetics.
2. Kaufman, K. A., Glass, C. R., & Pincau, T. R. (2018). *Mindful sport performance enhancement: Mental training for athletes and coaches*. American Psychological Association.

This course will enable the students to know about the different technology being used in different games and sports along with its function for the purpose of understanding the movement, identifying the mistakes and developing the sporting skills and techniques. The student will also understand difference between the maximum, basic and absolute strength. Sports help students to develop their physical skills, get exercise, make friends, have fun, learn to play as a member of a team, learn to play fair, and improve esteem. The major objective of the course games and sports to get freedom from the stress, worries. Sports and Games are mental and physical activities and contest. Moreover, it increases the immunity of the person. As it increases the blood flow in the body and makes it adaptable for exertion. Develop knowledge and appreciation of various game forms. Analyses game structures and processes. It also develop performance competency in games through experiential learning. Explores and analyses potentially positive and negative outcomes of participating in games and sport.

### **Contents**

1. Introduction to games
2. Passing, Accuracy, Dribbling
3. Receiving, kicking, Shooting, Penalties
4. Jogging, Throwing, Heading, Volley
5. Demonstration & Presentation of Skills
6. Coaching Skills, Conducting & Officiating Skills
7. Simple Passing, Throwing, Catching, Side Pass, Chest Pass, Tip Pass
8. Dribbling with Running, Shooting Style, Layup, Setup
9. Conduct Competition
10. Demonstration & Presentation of Skills
11. Coaching Skills
12. Conducting & Officiating Skills

### **Recommended Texts**

1. Galat, J. (2017). *Coaching youth football*. Champaign, IL: Human Kinetics.
2. Gillett, J., & Burgos, B. (2020). *Strength training for basketball*. Champaign, IL: Human Kinetics.

### **Suggested Readings**

1. Tod, D., & Eubank, M. (2020). *Applied sport, exercise, and performance psychology: Current approaches to helping clients*. Abingdon, Oxon: Routledge.
  2. Murray, R., & Kenney, W. I. (2020). *Practical guide to exercise physiology: The science of exercise training and performance nutrition*. Champaign, IL: Human Kinetics.
  3. Ehrman, J. K., Liguori, G., Magal, M., & Riebe, D. (2018). *ACSM's guidelines for exercise testing and prescription (10<sup>th</sup> ed.)*. Philadelphia, PA: Wolters Kluwer.
- M

The purpose of this course is to aid students in acquiring a basic understanding of, and new appreciation for, the structures of the human body and their relationships using a systems-based approach. Students will be introduced to anatomic terminology in order to facilitate this understanding. Knowledge of anatomy is a fundamental component of sports coaching profession. Topics covered will include the basic organization of the body and major body systems along with the impact of diseases on certain systems. Working with topics of basic anatomical terminology to the biochemical composition of the human body, all the way into great detail of each of the major systems of the body, One of the goals of this course is to prepare students with the skills necessary to be successful in future sports science theory classes and in sports practical. The major purpose of the course is to provide the students with a comprehensive overview of normal structure and function morphology and functional anatomy of the human body. Another goal of this course is to prepare the students with the skills. Human Anatomy is a course that will enable students to develop an understanding of the relationships between the structures and functions of the human body. Students will also learn the mechanisms for maintaining homeostasis within the human body.

### Contents

1. Introduction to Human Anatomy
2. Bones & Joints
3. Skeletal Muscles
4. Nervous System
5. Digestive System
6. Cardiovascular System
7. Respiratory System
8. Endocrinology
9. Injuries & Rehabilitation
10. Fracture
11. Sprain
12. Muscle injuries

### Recommended Texts

1. Jarmey C. (2018). *The Pocket Atlas of Human Anatomy: A Reference for Students of Physical Therapy, Medicine, Sports, and Bodywork* (2<sup>nd</sup>ed.). North Atlantic Books.
2. Netter, F. II.(2019). *Atlas of Human Anatomy: Netter Basic Science* (7<sup>th</sup>ed.). New York:Elsevier.

### Suggested Readings

1. Roberts, A. M. (2016). *The complete human body: The definitive visual guide* (2<sup>nd</sup> ed.). London: Dorling Kindersley Limited.
  2. Scanlon, V. C., & Sanders, T. (2018). *Essentials of anatomy and physiology*. Philadelphia: F. A. Davis Company.
  3. Patton, K. T., & Thibodeau, G. A. (2018). *Anthony's Textbook of Anatomy & Physiology* (21<sup>st</sup>ed.). Wisconsin, USA: Elsevier.
  4. Drake, L., Wayne, A., Mitchell, W.M. (2020). *Gray's anatomy for students* (4<sup>th</sup>ed.). Philadelphia: Elsevier
- M

Games and sports are found in early human history and appear to be cultural universals. Volleyball and handball are popular indoor team event sports in which two teams are separated by centre line. Each team tries to score points by throwing/grounding a ball on the other team's net/court under organized rules. This course will Develop and share among members and others education, information, and leadership skills. Encourage members to promote the active participation by all youth in fun and healthy physical activities according to their interests and abilities. The purpose of this course is to provide learning experiences that will lead to the development of basic skills in team sports. In addition to skill acquisition, the course will focus on how to plan and implement the four stages of skill development in games through the use of extending, refining, and application tasks. Students will be expected to achieve an intermediate level of skill in the selected team sports. Practice outside of class time and individual tutoring may be necessary for the students to achieve the expected performance level.

### *Contents*

1. Introduction to Handball game
2. Ball, Ground, equipments, Measurement & Dimensions
3. Ball Catching, Ball throwing, Ball Passing, Ball Dribbling Skills
4. Jumps Shot, Penalty Shot, Throw off, Throw in, Offending & Defending Skills
5. Pivot, Goal Keeping Skills
6. Coaching Skills,
7. Conducting & Officiating Skills
8. Introduction to Volley Ball Game
9. Arms and shoulders strengthen exercises
10. Serving Skills
11. Digging (Passing) forearms, overhead
12. Ball Setting
13. Attack (Hitting)
14. Blocking – Attack; Defend
15. Defensive Skills – Rolling; Sliding

### *Recommended Books*

1. Joyce, D. (2014). *High-performance training for sports* (2<sup>nd</sup>ed.). Champaign, IL: Human Kinetics.
2. Prentice, W. E. (2017). *Principles of athletic training: A competency-based approach* (16<sup>th</sup>ed.). Vancouver, B.C.: Langara College.

### *Suggested readings*

1. Bompa, T. O., & Buzzichelli, C. (2015). *Periodization training for sports* (3<sup>rd</sup>ed.). Champaign: Human Kinetics.
2. Boyle, M. (2016). *New functional training for sports* (2<sup>nd</sup>ed.). Champaign, IL: Human Kinetics.
3. Konin, J. G., & Ray, R. (2019). *Management strategies in athletic training* (5<sup>th</sup>ed.). Champaign, IL: Human Kinetics.
5. Azar, F. M. (2019). *Illustrated tips and tricks in sports medicine surgery* (1<sup>st</sup>ed.). Philadelphia: Wolters Kluwer

# Semester II

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## Semester 2

STAT-5101	Introductory Statistics	3 (3-0)	ID-3
PEDU-6418	Scientific Coaching	3 (3-0)	Major-5
PEDU-6419	Curriculum Development in Physical Education	3 (3-0)	Major-5
PEDU-6420	Sports Administration and Management	3 (3-0)	Major-7
PEDU-6421	Practical Athletics (Sprint Races)	2 (0-2)	Major-8
PEDU-6422	Practical Games (Table Tennis, Badminton)	2 (0-2)	Major-9
PEDU-6434	Science of Track & Field	3 (3-0)	Deficiency 3
PEDU-6438	Athletics' (Jumps & Throws)	2 (0-2)	Deficiency 4
			Semester Total Credit Hours: 16

*MM*

This is the general Statistics course designed for undergraduate programs of arts and social sciences. Statistics is an integral part of arts and social science research. We live in a world where there is no shortage of numerical data and there is increasing demand for people who know how to make sense of it independent of the field of work. The goal of this course is to turn the students into one of such categories. In this course, students will learn the basics of descriptive and inferential statistics and the most commonly used statistical techniques found in arts and social science research. The course is designed to give the students an in depth understanding of how these statistical techniques work but minimizing the mathematical burden on the student. While more focus will be given on the statistical analysis with the help of some statistical software SPSS, Excel etc. Moreover, the teacher will also focus on interpretation of statistical data results which are obtained from the statistical soft wares. So these activities will improve the analytical and research activities of arts and social science students.

### **Contents**

1. Introduction to Statistics: Descriptive and Inferential Statistics, Limitations of Statistics, Scope of Statistics, Variable, Data, Types of Variable and Data, Scales of Measurements
2. Display of Data: Tabulation of Data, Graphical Display, Histogram, Bar Charts, Pie Chart, Stem and Leaf Plots
3. Measures of Central Tendency: Mean Median, Mode, Box Plot, and Application in Real Life
4. Measures of Dispersion: Range, Quartile Deviation, Mean Deviation, Variance and Standard Deviation, Coefficient of Variation, Z-score and their Application
5. Normal Distribution: Normal Distribution and its Application
6. Sampling and Sampling Distribution
7. Hypothesis Testing: z test, t-test, Chi-square test
8. Regression Analysis: Simple Linear Regression, Multiple Regressions
9. Correlation Analysis: Simple correlation, multiple correlations, partial correlation, partial correlation
10. Test of independence between qualitative variables
11. All the observational analysis will be carried out using MS Excel and SPSS

### **Recommended Texts**

1. Mann, P.S. (2016). *Introductory statistics* (9<sup>th</sup> ed.). New York: John Wiley & Sons.
2. Weiss, N.A. (2017). *Introductory statistics* (10<sup>th</sup> ed.). England: Pearson Education.

### **Suggested Readings**

1. Chaudhry, S. M. & Kamal, S. (2010). *Introduction to statistical theory part I & II*. Pakistan: IlmiKitabKhana.
2. Dunn, D.S. (2001). *Statistics and data analysis for the behavioural sciences*. New York: McGraw Hill Ross, S. M. (2010). *Introductory statistics* (3<sup>rd</sup> ed.). New York: Academic Press

Sports coaching are a great way to express your passion for sport. This course offers you the opportunity to specialize in the academic study of sports coaching, gaining the qualifications and practical skills to be a successful coach. A large element of the taught content and assessment will be practical to allow you to apply theory to practice. This approach will allow you to immerse yourself in the coaching process through developing knowledge of the needs of the participants, understanding how to create an engaging learning environment and developing your ability to reflect upon your coaching experiences. Sports Coaching course aims to produce exceptional coaches who are competent, confident, and reflective, with strong practical application of scientific knowledge and theoretical frameworks. Students will have a wide range of opportunities to develop your coaching practice with an emphasis on optimal youth development. It combines a thorough understanding of sport and exercise science with knowledge of the range of roles and contexts within which a coach works. Theoretical, vocational, and practical elements are included to help students gain a comprehensive understanding of sport science, which underpins coaching practice.

### **Contents**

1. Introduction to sports coaching
2. Teaching Methodology for a Coach
3. Role of a Coach
4. Development of Skill Analysis and Strategies
5. Periodization of Training
6. Components of Fitness
7. Coaching & Training Plans of major Games

### **Recommended Texts**

1. Lee, S. (2015). *Coaching for performance: Realising the Olympic dream*. Place of publication not identified: Routledge.
2. Whitmore, J. (2017). *Coaching for performance: The principles and practice of coaching and leadership* (3<sup>rd</sup> ed.). London: Nicholas Brealey Publishing.

### **Suggested Readings**

1. Bates, T. (2017). *The future coach: Creating tomorrow's soccer players today: 9 key principles for coaches from sport psychology* (7<sup>th</sup> ed.). Oakamoor, Staffordshire: Dark River.
2. Tsokaktsidis, M. (2017). *Coaching transition play full sessions from the tactics of Simeone, Guardiola, Klopp, Mourinho & Ranieri* (5<sup>th</sup> ed.). London: SoccerTutor.
3. Goubin, T. (2018). *Marcelo Bielsa: El loco enigmático* (3<sup>rd</sup> ed.). Paris: Hugo poche.
4. Murphy, J. (2020). *Power of your subconscious mind* (7<sup>th</sup> ed.). Place of publication not identified: RUPA &.

Basic considerations and issues of standards-based physical education curriculum is the focus on essential national and state physical education content standards, components, development, implementation, management, and assessment of widely used curricula in physical education. This course is designed with the purpose to acquaint students with basic concepts, theories and types of Health & Physical Education Curriculum related to development process and strategies adopted for evaluation and changes in curriculum as required. Identify and analyse existing curricula models. Select a curriculum model consistent with educational philosophies from a variety of sources. Identify the essential components of an effective curriculum. Create and develop a physical education curriculum for students with varying levels of ability and needs, complete with implementation and assessment strategies. This course defines as the process of selecting, organizing, executing and evaluating learning experiences on the basis of the needs, abilities and interests of the learners and the nature of the society or community.

### **Contents**

1. Introduction
2. Planning The Physical Education Curriculum
3. Human Resource Management
4. Curriculum Research And Change
5. Organization For Instruction
6. The Curriculum Guide
7. The Physical Education Program
8. Evaluating The Curriculum

### **Recommended Texts**

1. Adams, M. L., Baxter, K., Booth, D., Bunds, K. S., Giardina, M. D., Clark, M., & McDonald, M. G. (2020). *Sport, physical culture, and the moving body: Materialisms, technologies, ecologies*. Rutgers University Press.
2. Pangrazi, R. P., & Beighle, A. (2019). *Dynamic physical education for elementary school children*. (19th Ed.). Human Kinetics Publishers.
3. Lund, J., & Fannhill, D. (2014). *Standards-based physical education curriculum development*, (3rd Ed.). Jones & Bartlett Publishers.

### **Suggested Readings**

1. Ovens, A., Hopper, T., & Butler, J. (Eds.). (2013). *Complexity thinking in physical education: Reframing curriculum, pedagogy, and research*. Routledge.
2. Giulianotti, R. (2015). *Sport: A critical sociology*. (2nd Ed.). John Wiley & Sons.
3. Broch, T. B. (2020). *A Performative Feel for the Game*. Springer International Publishing.
4. Tischler, H. L. (2013). *Cengage advantage books: Introduction to sociology*. (11th Ed.). Cengage Learning.

This course is graduate level course of M.Sc. Physical Education. The aim of the course is to enable students to develop essential skill required in sports management and administration. In this course students will get the knowledge of management processes such as planning, directing, organizing, staffing and controlling, operations, strategies, total quality management and marketing. Students will get understanding of management and administration principles, various leadership styles and their practical applications, scope of the subject and career opportunities in various national and international sports organizations, fitness and sports industry. Students will learn structure and organizational hierarchy of various national and international sports organizations, various managerial positions and will enhance professional and communication skills to hunt appropriate job in job market effectively and efficiently. Students will be able to plan and organize sports events as a team leader and as a team member. Students will be able to apply research methods, and an understanding of the specific needs and norms of the sports organizations, fitness and sports industry.

### **Contents**

8. Introduction to Administration and Management
9. Organization Structure and Designs
10. Human Resource Management
11. Facility Management
12. Financial Management
13. Inventory and Purchasing
14. Maintenance of Existing Facilities

### **Recommended Texts**

1. Chelladurai, P., & Kerwin, S. (2017). *Human resource management in sport and recreation* (3<sup>rd</sup>ed.). Champaign, IL: Human Kinetics.
2. Hoye, R., Smith, A. C., Nicholson, M., & Stewart, B. (2018). *Sport management: principles and applications* (5<sup>th</sup>ed.). London, UK: Routledge.

### **Suggested Readings**

1. Ruta, D., & Sala, I. (2018). HRM in Sport Organizations. In, Brewster C., Cerdin JL. (eds), *HRM in Mission Driven Organizations* (pp. 183-220). London, UK: Palgrave Macmillan.
2. Gentile, D. (2019). *Athletic Administration for College, High School, Youth, and Club Sport*. Burlington, MA: Jones & Bartlett Learning.
3. Lussier, R. N., & Kimball, D. C. (2019). *Applied sport management skills* (3<sup>rd</sup>ed.). Champaign, IL: Human Kinetics.
4. Pedersen, P. M., & Thibault, L. (2019). *Contemporary Sport Management* (6<sup>th</sup>ed.). Champaign, IL: Human Kinetics.

This course is a graduate level practical course of M.Sc. Physical Education. The course covers theoretical topics as well as practical application and skill performance of sprint race including 100m, 200m, 400m and 800m, 4 x 100m, 4 x 400m, 100m hurdle, 110m hurdle, 400m hurdles. The main focus of the practical is to enable students to design a training program for them and for other athletes with coaching perspectives, containing general and specific warm up, cool down, static and dynamic stretching exercises, and practice of technical and tactical skills to improve physical performance. It will increase students' understanding with up to date rules and regulation framed by World Athletics (International Track and Field Organization). The practical sessions enable students to identify periodization of training ranging from off season training to peak season training, division of training program to micro, mesa and macro cycles. It also familiar them with international records, events along with state of the art technology used in track and field events for continuous performance development process.

### **Contents**

1. Introduction of Sprint Races
2. Warm up & Cool Down Methods & Techniques (General & Specific)
3. Stretching and strengthening exercise
4. Neuromuscular coordination exercises
5. Static and dynamic stretching
6. Races with different intensity
7. Improve stride length and stride frequency
8. Power training
9. Coordination exercises
10. Weight Training/ Resistance Training exercises
11. Rules and Regulation of Sprint Races
12. Duties and of officials & organizing committee
13. Demonstration and Presentation

### **Recommended Texts**

1. Shepherd, J. (2009). *101 Youth Athletics Drills*. London, UK: A & C Black Publisher Ltd.
2. Gifford, C. (2012). *Track and field* (7<sup>th</sup>ed.). Mankato, MN: Amicus.

### **Suggested Readings**

1. American Sport Education Program (2008). *Coaching youth track & field*. Champaign, IL: Human Kinetic.
2. Husbands, C. (2013). *Training, techniques and improving performance*. Ramsbury, England: The Crowood Press.
3. Lewindon, D., & Joyce, D. (2014). *High-Performance Training for Sports*. Champaign, IL: Human Kinetics.
4. Smith, J. & Clark, J. (2018). *Speed strength: a comprehensive guide to biomechanics, demands and training methodology for linear speed*. Berkely, CA: Just Fly Sports.

The student will know the basics of Badminton and table tennis games. To acquire the basic knowledge need to analyse skills required with perspective of teaching, coaching, healthy life style, Physical fitness. This course will Develop and share among members and others education, information, and leadership skills. Encourage members to promote the active participation by all youth in fun and healthy physical activities according to their interests and abilities. The course aims to provide students with opportunities to acquire the knowledge, understanding and experience necessary to develop an appreciation of, and play, the sport of badminton and table tennis. Students will be taught the essential skills necessary to play the sport. This unit plan is an outline of our four lesson badminton and table tennis unit. Make a forhand shot, aiming for one of the hoops on the ground; the retriever will gather the birdies back to the feeder. Teacher demo first, and then students can follow along.

### **Contents**

1. Introduction, Ready Position
2. The grip, Racket angles
3. Basic ball control, Basic strokes
4. Backhand push, Forhand drive
5. Backhand drive, Forhand push
6. Return of service
7. Footwork Patterns, Service rules
8. Duties of officials & organizing committees
9. Basic Gripping Technique. Learn how to hold your racket using the forehand and backhand grip
10. Basic Footwork. Good footwork allows good movement around the court
11. Strokes are simply your swing action to hit the shuttle Badminton Serve
12. Basic Stance, Defensive High Clear/lob
13. Drop Shots, Smashing
14. Basic Fouls of Badminton
15. Basic Trainings of Badmintons
16. Duties of officials & organizing committees

### **Recommended Texts**

1. Wagner, H., Pfusterschmid, J., Von Duvillard, S. P., & Müller, E. (2012). *Skill-dependent proximal-to-distal sequence in team-handball throwing*. *Journal of Sports Sciences*, 30(1), 21-29
2. Azar, F. M. (2019). *Illustrated tips and tricks in sports medicine surgery* (1<sup>st</sup>ed.). Philadelphia: Wolters Kluwer.

### **Suggested Readings**

1. Joyce, D. (2014). *High-performance training for sports* (2<sup>nd</sup>ed.). Champaign, IL: Human Kinetics.
2. Prentice, W. E. (2017). *Principles of athletic training: A competency-based approach* (16<sup>th</sup>ed.). Vancouver, B.C.: Langara College

Track and field is a sport that incorporates different types of athletic events. Track events are running events that range from short distance sprints to middle distance runs of a mile or so to long distance runs, like a 26-mile plus marathon. Field events include strength events, such as the shot put and discus, and throwing events, such as the javelin and hammer. The heptathlon and the decathlon are a combination of seven and ten events, respectively, and incorporate both track and field contests together in a quest for the highest score. The purpose of the course is to equip the students with the latest techniques and technology, rules and regulations laid down by the International Association of Athletics Federations (IAAF). Through these course students are tuned to get the required information regarding marking of the standard tracks, judgment and officiating for various Athletic Events including: Running, Jumping and Throwing etc. Moreover, learners can take a closer look at some of the most common track and field events and examine training procedures that can help athletes improve their skills.

### *Contents*

1. Olympic Movements
2. Specification of Standard Track
3. Organization and Administration of Athletic Competition
4. Rules of Track Events
5. Jumping Events
6. Horizontal Jumps
7. Vertical Jumps
8. Throwing Events
9. Combined events competitions
10. Race Walking Events
11. Road Races
12. Cross Country, Mountain and Trail Races
13. Athletic Committees
14. Official and their duties

### *Recommended Texts*

1. Gifford, C. (2012). *Track and field* (7<sup>th</sup>ed.). Mankato, MN: Amicus..
2. Rasool, S. (2018). *Rules of track and field events* (3<sup>rd</sup>ed.). Lahore: Ilmi Publishers.

### *Suggested Readings*

1. Koerner, H., & Chace, A. W. (2014). *Hal Koerner's field guide to Ultrarunning: Training for an Ultramarathon, from 50K to 100 miles and beyond* (5<sup>th</sup>ed.). Boulder, CO: VeloPress.
2. Gilani, B. (2018). *Rules of track and field events* (4<sup>th</sup>ed.). Lahore: Gilani Publishers.
3. Kastor, A. (2018). *Running your first marathon: The complete 20-week marathon training plan* (2<sup>nd</sup>ed.). Emeryville, CA: Rockridge Press.

This course is a graduate level practical course of BS PHYSICAL EDUCATION (5th Semester Intake). The course covers theoretical topics as well as practical application and skill performance of jumps (horizontal & vertical) and throws. The main focus of the practical is to enable students to design a training program for themselves and for other athletes with coaching perspectives, containing general and specific warm up, cool down, static and dynamic stretching exercises, and practice of technical and tactical skills to improve physical performance. It will increase students' understanding with up-to-date rules and regulation framed by World Athletics (International Track and Field Organization). The practical sessions enable students to identify periodization of training ranging from off season training to peak season training, division of training program.

### Contents

1. Introduction of Vertical & Horizontal Jumps
2. Rules & Techniques of Vertical & Horizontal Jumps
3. Phases and Specific Exercise for Jumps
4. Training Method (Polymeric Training, Weight Training, Speed Training)
5. Exercises (Dynamic and Static exercises, Coordination exercise, Workout on phases)
6. Awareness of Warm up and Cool) of Vertical & Horizontal Jump
7. Coaching (Skills, techniques & demonstration)
8. Duties of Officials and Organizing Committee
9. Introduction to Throwing Events
10. Javelin and Hammer throws (Preparing, Crossover and Begin to compete throw)
11. Releasing Angle and Velocity
12. Discus and Shotput throws
13. Drills (grip and release, Body Composition, start to complete throw, start to power position, release angle, Velocity)

### Recommended Texts

1. Shepherd, J. (2009). *101 Youth Athletics Drills*. London, UK: A & C Black Publisher Ltd.
2. Gifford, C. (2012). *Track and field* (7<sup>th</sup>ed.). Mankato, MN: Amicus.

### Suggested Readings

1. Rogers J. L. (2000). *USA Track & Field Coaching Manual*. Champaign, IL: Human Kinetics.
  2. McGinnis, P. M. (2004). *Biomechanics of Sport and Exercise* (2<sup>nd</sup> ed.). Champaign, IL: Human Kinetics.
  3. American Sport Education Program (2008). *Coaching youth track & field*. Champaign, IL: Human Kinetic.
- MS

# Semester III

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## Semester 3

URCG-5130 / URCG-5132	Understanding of Holy Quran II or Ethics II	1 (0-1)	GE-02
URDU-5102	Functional Urdu	3 (3-0)	ID-4
PEDU-6423	Capstone Project	3 (3-0)	Compulsory
PEDU-6424	Sports Psychology	3 (3-0)	Major-10
PEDU-6425	Test, Measurement & Evaluation in Sports	3 (3-0)	Major-11
PEDU-6426	Exercise Physiology	3 (3-0)	Major-12
PEDU-6435	Theory of Games	3 (3-0)	Deficiency 5
			Semester Total Credit Hours: 16

## Model Course Outline for the Course Understanding of Quran – II

**Course Title:** Understanding of Quran – II

**Course Book:** Muallim ul Quran (Volume 3, 4 & 5) by Dr Ubaid ur Rahman

**Credit Hours:** 1 (0-1)

**Contact Hours:** 3 per week

**Weeks:** 15-16 (45-48 hours)

### Course Learning Outcomes:

*By the end of this course, students will be able to:*

1. Directly comprehend hundreds of Quranic sentences & verses.
2. Understand at least 80 to 85 % of each page of the holy Quran.
3. Understand common verses across different Quranic topics.
4. Achieve proficiency in the basic and advance linguistic aspects of the Arabic language.
5. Understand the difference between Quranic verbs in various forms, such as present, past and imperative.
6. Develop the ability to understand long verses of the holy Quran independently and then comprehend their interpretation.

### Provision of material, content and books:

- **Paper book:** All volumes are available in printed book form.
- **Tutorial videos:** Teaching video of each lesson available on YouTube.
- **Confirmation Videos:** A complete series of confirmation videos of all lessons is available in which the student can confirm his answers.
- **A flipbook:** A flipbook edition is also accessible.
- **Helping material:** Helping material for the teachers like quizzes, question papers and images is available on website.

### Course Outline:

Weeks	Lectures	Units	Lessons	Assignments/Home Task	
1.	1.	6	6	Understanding & Translation of Verses	Present Tense صيغة جمع مذكر غائب مثل يعبدون
	2.	6	7-8	Understanding & Translation of Verses	Present Tense صيغة جمع مذكر غائب مثل يعبدون
2.	1.	6	9-10	Understanding & Translation of Verses	Present Tense صيغة مفرد مذكر مخاطب (تعبد) وجمع مذكر مخاطب (تعبدون)
	2.	6	11-12	Understanding & Translation of Verses	Present Tense صيغة جمع مذكر مخاطب (تعبدون)

3.	1.	6	13	Understanding & Translation of Verses	صيغة المتكلم (أعيد) Present Tense صيغة جمع المتكلم (نعيد)
	2.	6	14-15	Understanding & Translation of Verses	Negative Imperative صيغة المفرد و صيغة الجمع , لا تعبدوا, لا تعبدوا
4.	1.	6	16-17	Understanding & Translation of Verses	Conditional Sentences & masdar moawal (مصدر مؤول)
	2.	6	18-19	Understanding & Translation of Verses	Laam uttaleel (لام التعليل) & Laam ul jhood(لام الجحود)
5.	1.	6	20-21	Understanding & Translation of Verses	Present with object. pronouns & Passive Voice
	2.	6	Revision (Unit 6)	Quiz	
6.	1.	Unit 7	1 (sec 1-3)	Understanding & Translation of Verses	Past Tense صيغة المفرد للغائب
	2.	6	1 (Sec 4-5)	Understanding & Translation of Verses	Past Tense صيغة المفرد للغائب
7.	1.	6	1 (Sec 5-6)	Understanding & Translation of Verses	Past Tense صيغة المفرد للغائب
	2.	6	1 (Sec 7-9)	Understanding & Translation of Verses	Past Tense صيغة المفرد للغائب
8.	1.	7	Revision	Understanding & Translation of Verses QUIZ	Past Tense صيغة المفرد للغائب
	2.	MID TERM			
9.	1.	7	2 (sec 1-2)	Understanding & Translation of Verses	Past Tense صيغة الجمع للغائب عبدوا
	2.	7	2 (sec 3)	Understanding & Translation of Verses	Past Tense صيغة الجمع للغائب عبدوا
10.	1.	7	2 (sec 4-5)	Understanding & Translation of Verses	Past Tense صيغة الجمع للغائب عبدوا
	2.	7	2 (sec 6-7)	Understanding & Translation of Verses	Past Tense صيغة الجمع للغائب عبدوا
11.	1.	7	3 (sec 1-2)	Understanding & Translation of Verses	Past Tense صيغة الجمع للمتكلم عبدنا

	2.	7	3 (sec 2-3)	Understanding & Translation of Verses	Past Tense صيغة الجمع للمتكلم عبدنا
12.	1.	7	3 (sec 3-4)	Understanding & Translation of Verses	Past Tense صيغة الجمع للمتكلم عبدنا
	2.	7	3 (sec 4-5)	Understanding & Translation of Verses	Past Tense صيغة الجمع للمتكلم عبدنا
13.	1.	7	4 (sec 1-2-3)	Understanding & Translation of Verses	Past Tense صيغة الجمع للمخاطب عبدتم
	2.	7	4 (sec 4-5)	Understanding & Translation of Verses	Past Tense صيغة الجمع للمخاطب عبدتم
14.	1.	7	5-6	Understanding & Translation of Verses Quiz	Past Tense صيغة المتكلم والمخاطب عبدت ، عبدت
	2.	7	7	Understanding & Translation of Verses	Past Tense صيغة المونث للغائب عبدت
15.	1.	7	8	Understanding & Translation of Verses	Passive Voice (Past Tense) فعل مجهول للمفرد
	2.	7	9	Understanding & Translation of Verses	Passive Voice (Past Tense) فعل مجهول الجمع
16.	1.	8	1-4	Understanding & Translation of Verses	Imperative Verb for singular فعل الأمر للمفرد
	2.	7	5-8	Understanding & Translation of Verses	Imperative Verb for plural فعل الأمر للجمع

**1-Course Description**

The course *Ethics-II* is designed to provide students with a deeper understanding of ethical principles and practices from both Semitic and non-Semitic religions, as well as their application in professional and social contexts. Students will engage with Jewish, Christian, Islamic, Hindu, Buddhist, Sikh, Confucian, and Jain ethical traditions. The course emphasizes moral reasoning, decision-making, tolerance, and peacebuilding. It aims to cultivate an inclusive, humanistic, and holistic approach towards ethical living and interfaith engagement.

**2- Learning Objectives**

The course objectives are to:

1. Understand the fundamental principles and theories of ethics.
2. Introduce the ethical and moral teachings of Judaism, Christianity, Islam, and Hinduism.
3. Explore the ethical teachings of non-Semitic religions such as Buddhism, Sikhism, Confucianism, and Jainism.
4. Develop critical thinking skills to evaluate ethical arguments and theories.
5. Promote ethical leadership and interfaith harmony.

**3- Learning Outcomes**

By the end of this course, students will be able to:

1. Identify and analyze major ethical theories and teachings from world religions.
2. Understand the role of religions in improving moral values and social behavior.
3. Demonstrate ethical decision-making in various personal and professional contexts.
4. Recognize the impact of ethical decisions on individuals, communities, and society.
5. Apply skills of ethical leadership, including communication, conflict resolution, and inclusive engagement.

**4-Course Structure**

1. Interactive lectures, Group discussions and debates
2. Reflection papers and presentations
3. Assignments and Quiz

~~Course Title: Ethics-II (For Non-Muslim Students) Course Code: URGC-5130~~ X

**Course Contents****Unit 1: Ethical Teachings of Semitic Religions**

- Judaism and its ethical teachings
- Christianity and its ethical teachings
- Islam and its ethical teachings

**Unit 2: Ethical Teachings of Non-Semitic Religions**

- Hinduism and its ethical teachings
- Sikhism and Buddhism: ethical values and practices
- Confucian and Jain ethical traditions

**Unit 3: Professional Ethics**

- Ethics for students and teachers
- Ethics in doctor-patient relationships
- Ethics in trader-customer interactions

**Unit 4: Concept and Significance of Tolerance**

- Definition, need, and importance of tolerance
- Teachings of Semitic religions on tolerance and their contemporary relevance
- Teachings of non-Semitic religions on tolerance and their contemporary relevance

**Unit 5: Foundational Values and Ethics for Peacebuilding in Society**

- Respect for sacred scriptures, personalities, places of worship, and religious symbols
- Promotion of tolerance and broadmindedness
- Encouragement of dialogue and harmony
- Benevolence towards humanity
- Establishment of justice and fairness
- Patience, forbearance, and forgiveness

**Textbook**

- Kidder, R. M. (2009). *How Good People Make Tough Choices: Resolving the Dilemmas of Ethical Living*. Harper.

**Suggested Readings**

1. Barash, D. P., & Webel, C. P. (2014). *Peace and Conflict Studies*. Sage.
2. Smart, N. (1998). *The World's Religions*. Cambridge University Press.
3. Nasr, S. H. (2003). *The Heart of Islam: Enduring Values for Humanity*. HarperOne.
4. Sharma, A. (2006). *Hindu Ethics: Purity, Abortion, and Euthanasia*. SUNY Press.
5. Harvey, P. (2000). *An Introduction to Buddhist Ethics: Foundations, Values and Issues*. Cambridge University Press.
6. Coward, H., & Perkinson, J. (2013). *A Cross-Cultural Dialogue on Ethical Leadership*. Wilfrid Laurier University Press.
7. Confucius. (1998). *The Analects*. Oxford University Press.

1: آوازیں، لہجہ، تلفظ، املا اور ذخیرہ الفاظ:

1۔ اردو کی آوازیں اور عمومی اغلاط، ب۔ لہجے کی اہمیت اور مشق، ج۔ املا اور املا کی اہم اغلاط، د۔ ذخیرہ الفاظ۔ دخیل الفاظ میں احتیاط کی ضرورت، ر۔ اختلاط لفظی (کوڈکسنگ) اور انتقال لفظی (کوڈ سوچنگ) میں احتیاط، س۔ محاورہ، ضرب الامثال۔

2۔ درست بول چال / شاہستگی:

1۔ معروضی اور موضوعی اور خطابیہ گفتگو کے تقاضے، ب۔ اظہار، عرض، استفہام، ادعا، دعائیہ، ایجاب، انکار، مدح، ذم، تعجب، تمنا، ج۔ رسمی اور غیر رسمی گفتگو، د۔ جملے کی ساخت کا تصور، الفاظ کے مقام کا ادل بدل۔

3۔ درست قرأت:

1۔ عبارت / پیراگراف میں جملے کا کردار، جملوں کا معنوی تعلق، پیراگراف میں موجود معنی اکائیاں، معنوی اکائیوں کا تعلق، تسلسل، تقدیم و تاخیر، رموز اوقاف اور مطابقت، ب۔ مضمون کی قرأت۔ رسمی عبارتوں کی قرأت۔

4۔ رسمی تحریریں:

1۔ درخواست، حلف نامہ، اقرار نامہ، بیع نامہ، رسید، رسمی خطوط، ب۔ رپورٹ نویسی، ج۔ روداد نویسی، نکات نویسی، د۔ فارم کی تیاری اور فارم پر کرنا۔ انٹرویو، ر۔ مضمون نویسی۔

مجوزہ کتب:

1۔ املا نامہ۔ گوپی چند نارنگ (مرتب)

2۔ عبارت کیسے لکھیں۔ رشید حسن خان

3۔ املا اور تلفظ۔ رشید حسن خان

4۔ فن انشا پر دازی۔ محی الدین قادری زور

5۔ اردو انشا پر دازی۔ سید امیر حسن نورانی

6۔ جامع الامثال۔ وارث سرہندی۔ شان الحق حقی

7۔ درس بلاغت۔ شمس الرحمان فاروقی

8۔ شعار زبان دانی۔ ڈاکٹر صابر سنبھلی

This course provides students with an introduction to the research topic, research design and methodologies in the fields of sport science, physical education and recreation. Students will learn to read and interpret existing research articles, select appropriate methodologies for a researchable question, and conduct a literature review on a topic of interest. This course will also be an introduction to preparing a research proposal including selecting research methods appropriate to meet the desired outcomes of a study. Researchers within the Physical Education Research Forum aim to engage in research that enhances our understanding of what effective teaching and learning is so that current policy, practice and professional development can be improved challenged and even transformed. This course requires the student to devise, conduct, and present a project examining an applied sports science issue. The student will be expected to work mainly independently in order to gain practical experience of topic selection, research design, data collection and data analysis.


### **Contents**

1. Introduction of Research Proposal / Thesis/ Project
2. Formulation and selecting of Research Problems
3. Selection of a topic
4. Submission of research topic
5. Changes/Corrections
6. Presentation
7. How to write an Introduction
8. Literature Review
9. Research Proposal / Synopsis Viva/ Defence

### **Recommended Texts**

1. Grattan, C., & Jones, I. (2010). *Research methods for sports studies* (2<sup>nd</sup>ed.). New York: Routledge.
2. Thomas, J. (2015). *Research methods in physical activity*. Champaign, IL: Human Kinetics.
3. Casey, A. (2018). *Conducting practitioner research in physical education and youth sport: reflecting on practice*. Abingdon, Oxon: Routledge.

### **Suggested Readings**

1. Vcal, A. J. (2014). *Research methods in sport studies and sport management: A practical guide*. London: Routledge, Taylor & Francis Group.
  2. Price, M. (2015). *Lab reports and projects in sport and exercise science: A guide for students*. London: Routledge.
  3. Bell, J., & Waters, S. (2018). *Doing your research project: A guide for first time researchers*. London: McGraw-Hill Education.
  4. Smith, M. F. (2018). *Research Methods in Sport*. London: Sage Publications.
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The course is an introduction to the theoretical and practical aspects of Sports Psychology. The purpose of the course is to provide the student with the basic knowledge of psychological factors and processes that influence the individual in sports. Focus is placed on a research-to-practice orientation that is used to prepare for sports performance. The main objective of the designed content is as the bridge to meet the gap in psychological disorders and elite sports performance also inspiring the students to enhance their ability to work closely with both performers and coaches. It also focuses on teaching skills to enhance athletic performance such as goal setting, imagery and injuries rehabilitation. Moreover, helping the athletes and people to achieve their full sporting and exercise potential by solving their complex problems and working as the part of a team. This course also examines psychological theories and research and their application to the sport/physical activity-related affect, behaviours and cognitions of participants as well as the individual and environmental factors which shape these outcomes.

### **Contents**

1. Introduction to Sports Psychology
2. Personality and sports
3. Nervous System of Human Body
4. Arousal, stress and anxiety
5. Cognitive and Behavioural Interventions for Peak Performance
6. Motivation and Performance
7. Concentration
8. Aggression in sports
9. Stress
10. Goal Setting
11. Self Confidence
12. Group Cohesion

### **Recommended Texts**

1. Tenenbaum, G. (2015). *Applied sport psychology* (7<sup>th</sup>ed.). Milton Park, Abingdon, Oxon: Routledge.
2. Weinberg, R. S., & Gould, D. (2019). *Foundations of sport and exercise psychology* (7<sup>th</sup>ed.). Champaign, IL: Human Kinetics.

### **Suggested Readings**

1. L., V. R., & Brewer, B. W. (2014). *Exploring sport and exercise psychology* (3<sup>rd</sup>ed.). Washington, D.C.: American Psychological Association.
2. Horn, T. S., & Smith, A. L. (2019). *Advances in sport and exercise psychology* (4<sup>th</sup>ed.). Champaign, IL: Human Kinetics.
3. Tod, D., & Eubank, M. (2020). *Applied sport, exercise, and performance psychology: Current approaches to helping clients*. Abingdon, Oxon: Routledge.
4. Lox, C. L., A., M. G., Gainforth, H. L., & Petruzzello, S. J. (2020). *The psychology of exercise integrating theory and practice* (5<sup>th</sup>ed.). New York: Routledge.

This course is designed to understand the fundamental and functional statistical tests, assessments, techniques, and evaluation concepts in the psychomotor, cognitive and affective domains; activities include collection and computer analysis of data in the area of Physical Education at various levels. It also provides the range of tests and techniques for testing Physical fitness, motor abilities and specific sports skills. e.g. (Reaction time, Endurance, Muscular Strength, Flexibility, Balance, Power, Speed, Agility, Coordination, Test criteria, Methods of grading etc. This course is intended to address the current practices in conducting data-based measurement and evaluation processes. Specifically, this course will examine statistical techniques necessary for manipulation and interpretation of various performance data. Descriptive statistics will be introduced and used for decision-making. The purpose of this course is to introduce students to the fundamental aspects of the measurement, analytic, and evaluative process for measuring Human Performance. The course includes both theoretical and practical applications.


**Contents:**

1. Introduction to Measurement and Evaluation
2. Grading in Physical Education
3. Basis of Statistics
4. Construction & Administration of a Test
5. Scales of Measurement
6. Characteristics of standard test
7. Evaluation of Aerobic Fitness or (Vo2 Max) Cardio – Vascular Fitness Aerobic Fitness
8. Measurement of Physical Fitness
9. Motor Performance Measurement
10. Evaluating Body Composition
11. Measurement of competitive sports skills
12. Measurement of Athletic skills

**Recommended Texts**

1. Morrow, J. R., Mood, D., Disch, J. G., & Kang, M. (2016). *Measurement and evaluation in human performance* (5<sup>th</sup>ed.). Champaign, IL: Human Kinetics.
2. Lacy, A. C., & Williams, S. M. (2018). *Measurement and Evaluation in Physical Education and Exercise Science* (8<sup>th</sup>ed.). New York: Routledge/Taylor & Francis Group.

**Suggested Readings**

1. Winnick, J. P., & Porretta, D. L. (2017). *Adapted physical education and sport* (6<sup>th</sup>ed.). Champaign, IL: Human Kinetics.
  2. Ehrman, J. K., Liguori, G., Magal, M., & Riebe, D. (2018). *ACSM's guidelines for exercise testing and prescription* (10<sup>th</sup>ed.). Philadelphia, PA: Wolters Kluwer.
  3. Gibson, A. L., Wagner, D. R., & Heyward, V. II. (2019). *Advanced fitness assessment and exercise prescription* (8<sup>th</sup>ed.). Champaign, IL: Human Kinetics.
  4. Miller, D. K. (2020). *Measurement by the physical educator: Why and how* (8<sup>th</sup>ed.). New York, NY: McGraw-Hill Education.
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The purpose of this course is to increase the student's knowledge and understanding about human physiology and the adaptations that occur during exercise. Exercise physiology is a branch of physiology that deals with the functioning of the human body during exercise. An understanding of how the body responds to acute and chronic exercise is crucial for the physical educator, athletic trainer, coach, fitness expert, or exercise physiologist. Emphasis is placed on bioenergetics as well as circulatory, respiratory and neuromuscular responses to the physical stress of exercise. Also discussed are the effects of environmental factors and cryogenic aids on athletic performance. The objective of this course is for the student to gain an understanding and working knowledge of how the body responds to exercise so that they may apply this knowledge to their chosen field. Indeed, understanding the interactions of metabolism, circulation, and structural adaptations in response to exercise and training are required to be an effective teaching or health care professional.

### **Contents**

1. Introduction of Physiology
2. Bio-Energetic
3. Conditioning in Sports
4. Cardiovascular Systems
5. Respiratory System
6. Exercise and Environments
7. Doping
8. Role of I.O.C.
9. Types of doping tests
10. Prevention of doping
11. Aging Exercise and Disease Prevention
12. Aging
13. Diabetes
14. Obesity
15. Blood pressure
16. Osteoporosis

### **Recommended Texts**

1. Ehrman, J., Gordon, P., Visich, P., & Ketcyian, S. (Eds.). (2018). *Clinical Exercise Physiology* (4<sup>th</sup>ed.). Champaign, IL: Human Kinetics.
2. Haff, G. G., & Dumke, C. (2018). *Laboratory Manual for Exercise Physiology* (2<sup>nd</sup>ed.). Champaign, IL: Human Kinetics.

### **Suggested Readings**

1. John, P., Cedric, X., Fabio, C. (2015). *Exercise physiology*. Philadelphia, F. A. Davis Company.
  2. Scott, K., Edward, T. (2015). *Exercise physiology: theory and application to fitness and performance* (10<sup>th</sup>ed.). New York: McGraw-Hill publisher.
  3. Kenney, W. L., Costill, D. L., & Wilmore, J. H. (2020). *Physiology of sport and exercise* (7<sup>th</sup>ed.). Champaign: Human Kinetics.
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This course is designed to equip the students/ learners with the updated knowledge regarding rules and regulations of various team sports as well as facility management. Play fields are dimension, judgment and officiating for different games at different levels. Another, a key component of the course is to enhance the performance of the Athletes. The ultimately purpose of the course is to provide deep knowledge about the philosophy of Rules and techniques of different games. The major concerned of this course is to provide learning experiences that will lead to the development of basic skills in team sports. In addition to skill acquisition, the course will focus on how to plan and implement the four stages of skill development in games through the use of extending, refining, and application tasks. An emphasis will be placed on the use of the game stages and movement framework as a guide for designing a variety of sports game experiences for students. Through the ages, sport has been known to affect various cultures, traditions, and values in our society the world of sport help us to gain a better understanding of our views on issues of equality, human rights, child development, standards for health and fitness, and character development, as well as many other issues.

### Contents

1. Types of Tournaments
2. Round Robin (League system)
3. Elimination (knock out)
4. Combination, Consolation
5. Double elimination, Ladder
6. Pyramid, Organization and Administration
7. Planning of sports facilities, their care and maintenance
8. Playfields, Gymnasia
9. Stadia, Covered areas
10. Artificial surfaces
11. Rules and techniques of the following games and their application
12. Badminton, Basket ball
13. Cricket, Football, Hand ball
14. Hockey, tennis, Table tennis, Volley ball

### Recommended Texts

1. Schott, G. (2016). *Violent games: Rules, realism, and effect* (4<sup>th</sup>ed.). London: Bloomsbury.
2. Gilani, B. (2018). *Theory of Games*(3<sup>th</sup>ed.). Lahore: Gilani Publishers.

### Suggested Readings

1. Masterman, G. (2014). *Strategic sports event management* (3<sup>rd</sup>ed.). New York, NY: Routledge.
  2. Annis, M. (2016). *The impact of technology in sport* (6<sup>th</sup>ed.). London: Raintree.
  3. Rasool, S.(2018). *Theory of Games*(4<sup>th</sup>ed.). Lahore: Ilmi Publishers.
  4. Harper, J. (2020). *Sporting gender: The history, science, and stories of transgender and intersex athletes* (3<sup>rd</sup>ed.). London: Rowman and Littlefield.
- N.M.

# Semester IV

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## Semester 4

PEDU-6427	Sports Nutrition	3 (3-0)	Major-13
PEDU-6428	Sports Biomechanics	3 (3-0)	Major-14
PEDU-6429	Sports Injuries & Rehabilitation	3 (3-0)	Major-15
PEDU-6430	Practical Hiking & Hill Tracking	2 (2-0)	Major-16
PEDU-6431	Practical Athletics (Javelin and Hammer)	2 (0-2)	Major-17
PEDU-6432	Minor Area Games	2 (0-2)	Major-18
PEDU-6436	Sports Medicine	3 (3-0)	Deficiency 6
			Semester Total Credit Hours: 15

This course provides a scientific background of applied nutrition and sports performance. Sports Nutrition is the study of nutrition and exercise for the promotion of health, fitness and prevention from diseases. Proper nutrition is the key to optimizing health and athletic performance. This course presents guidelines for the diet needed to be ready for athletic practice and competition, and how to refuel afterwards. The course contains the principles of nutrition and reviews the role and functions of fats, proteins, carbohydrates, vitamins, minerals, body fluids, metabolism, digestion and weight management. Students will be able to learn about energy expenditure during exercise, performance enhancement recovery, and the essential elements for growth, maintenance and repair of the body's tissues. Individuals gain an understanding of exercise physiology and learn how to create a nutritional fitness plan for each sport as well as weight loss supplements and performance-enhancing drugs are also a point of emphasis. They can learn to counsel individuals and to make diet recommendations.

### **Contents**

1. Introduction to sports nutrition
2. Energy and metabolism
3. Energy and muscular activities
4. Carbohydrates and sports performance
5. Science of carbohydrate loading
6. Fats and sports performance
7. Proteins and sports performance
8. Vitamins
9. Minerals
10. Water and Electrolytes
11. Eating Disorders
12. Weight Management
13. Body composition
14. Practical application of nutritional plan for strength/power athletes
15. Practical application of nutritional plan for endurance /ultra-endurance athletes

### **Recommended Texts**

1. Bean, A. (2017). *The complete guide to sports nutrition* (8<sup>th</sup>ed.). London: Bloomsbury Sport, an imprint of Bloomsbury Publishing Plc.
2. Fink, H. H., & Mikesky, A. E. (2020). *Practical applications in sports nutrition* (5<sup>th</sup>ed.). Burlington, MA, New Jersey: Jones & Bartlett Learning.

### **Suggested Readings**

1. Souza, P. D. (2016). *Sports nutrition* (1<sup>st</sup>ed.). New York: Syrawood Publishing House.
2. Baechle, T. R. (2016). *Essentials of strength training and conditioning* (4<sup>th</sup>ed.). Champaign, IL: Human Kinetics.
3. Spano, M. A., Kruskall, L. J., & Thomas, D. T. (2018). *Nutrition for sport, exercise, and health* (3<sup>rd</sup>ed.). Champaign (Illinois): Human Kinetics.
4. Jeukendrup, A. E., & Gleeson, M. (2019). *Sport nutrition* (4<sup>th</sup>ed.). Champaign, IL: Human Kinetics.

The course will provide the theoretical and experimental basis required for the application of biomechanics in the areas of sport and exercise. Biomechanics in Sports incorporates detailed analysis of sport movements in order to minimize the risk of injury and improve sports training equipment and techniques. Student and teachers will learn how to design a quantitative analysis, collect, analyse and interpret data obtained from the equipment associated with the measurement technique. From the analysis work of this course, student teachers will be expected to examine the relationship between performance measure and human motor system. The purpose of the course is to develop the student teacher's ability to conduct biomechanical analysis independently and to apply the knowledge in teaching and coaching as well as understanding of athletic performance through mathematical modelling, computer simulation and measurement, and enabling the learners/athletes to pursue their potential at highest level. Data will be collected and processed during laboratory sessions to examine relationships between displacement, velocity and acceleration, force, power, energy, impulse, momentum and fluid dynamics.

### **Contents**

1. Introduction to Sports Bio-Mechanics
2. Forces
3. Kinematic Concepts for Analysing Human Motion
4. Linear Kinematics for Analysing Human Movement
5. Kinetic Concepts for Analysing Human Movement
6. Linear Kinetics for Analysing Human Movement
7. Angular Kinematics of Human Movement
8. Angular Kinetics of Human Movement
9. Equilibrium and Human Movement
10. Fluid Mechanism and Human Movement
11. Mechanical Analysis of competitive Sports Techniques
12. Mechanical Analysis of Track & Field Events

### **Recommended Texts**

1. Hall, S. J. (2019). *Basic biomechanics* (8<sup>th</sup>ed.). New York, NY: McGraw-Hill Education.
2. Pangrazi, R. P., & Beighle, A. (2020). *Dynamic physical education for elementary school children* (19<sup>th</sup>ed.). Champaign, IL: Human Kinetics.

### **Suggested Readings**

1. Bartlett, R. (2014). *Introduction to sports biomechanics: Analysing human movement patterns* (3<sup>rd</sup>ed.). Milton Park, Abingdon, Oxon: Routledge.
2. Watkins, J. (2014). *Fundamental biomechanics of sport and exercise* (1<sup>st</sup>ed.). New York: Routledge/Taylor & Francis Group.
3. Payton, C., & Burden, A. (2018). *Biomechanical evaluation of movement in sport and exercise: The British Association of Sport and Exercise Sciences guide* (3<sup>rd</sup>ed.). Abingdon, Oxon: Routledge.
4. McGinnis, P. M. (2020). *Biomechanics of sport and exercise* (4<sup>th</sup>ed.). Champaign, IL: Human Kinetics.

This course is a graduate level course of M.Sc. Physical Education. The subject covers a broad range of topics. It building knowledge and skills to understand injuries, injuries classification, identification, CPR, First Aid, emergency and acute injuries management. Prevention and implementation of suitable exercise based rehabilitation programs designed by health care professionals for players and common people to regain their peak performance potential either independently or by assisting healthcare professionals. It helps students to manage the injuries through appropriate exercises and various therapies. The subject will enable students to analyse the posture and prescribe exercises to correct various posture deformities. Students will also be able to classify special population. In-depth study of this subject will help students, coaches, and researchers to understand how human body reacts to physical or recreational activity, exercises and sports, they can help participants, whether at an elite level or within the general community, to regain their peak potential after injury occurrence.

### **Contents**

1. Introduction to Sports Injuries
2. Classification
3. Methods of Injuries Prevention
4. Warm up, Cool down & First Aid
5. Management of Injuries
6. Exercise, Yoga, Hydro, Steam, Cryo and Physiotherapy
7. Posture Analysis
8. Adapted Physical Activities
9. Sports Massage

### **Recommended Texts**

1. Joyce, D., & Lewindon, D. (2016). *Sports injury prevention and rehabilitation: integrating medicine and science for performance solutions*. London, UK: Routledge.
2. Brukner, P., & Khan, K. (2019). *Brukner & Khans Clinical sports medicine* (5<sup>th</sup>ed.). Sydney, Australia: McGraw Hill Education.

### **Suggested Readings**

1. McGillicuddy, M. (2011). *Massage for sport performance*. Champaign, IL: Human Kinetics.
2. Knopf, K. G. (2015). *Injury rehab with resistance bands: complete anatomical information and rehabilitation routines for back, neck, shoulders, elbows, hips, knees, ankles and more*. Berkeley, CA: Ulysses Press.
3. Houghlum, P. A. (2016). *Therapeutic exercise for musculoskeletal injuries* (4<sup>th</sup>ed.). Champaign, IL: Human Kinetics.
4. Winnick, J. P., & Porretta, D. L. (2017). *Adapted physical education and sport* (6<sup>th</sup>ed.). Champaign, IL: Human Kinetics.
5. Walker, B. (2018). *The anatomy of sports injuries: your illustrated guide to prevention, diagnosis, and treatment* (2<sup>nd</sup>ed.). Chichester, England: Lotus Pub.

This course is designed to give the students a better understanding of the fundamental knowledge needed to enjoy hiking safely. Students will experience a lifelong activity that promotes a healthy and active lifestyle. The assumption that lifestyles formed early in life track into adulthood has been used to justify the targeting of health promotion programmes towards children and adolescents. The aim of the current study was to use data from the Northern Ireland Young Hearts Project to ascertain the extent of tracking, between adolescence and young adulthood, of physical activity, aerobic fitness, selected anthropometric variables, and diet. Tracking has been defined as the maintenance of relative position in rank of behaviour over time, such that subjects who rank highly for unfavourable risk profiles at a young age are likely to maintain their ranks through into adulthood. Although different indicators of physical activity and different methods of tracking of inactivity is less often studied. Youth resistance training: updated position statement paper from the national strength and conditioning association.

### **Contents**

1. Introduction of Hiking & Hill Tracking
2. Fitness training for hiking
3. Personal awareness and safety when hiking (communication, emergency plans)
4. Hiking techniques (posture, overcoming obstacles, use of trekking poles)
5. Equipment and proper use
6. Apply safe hiking techniques during hiking activities
7. Maps and Navigations
8. Hiking trip planning (route selection, proper gear, clothing, footwear, first aid, food, water)
9. Alter hiking choices for special weather and physical conditions
10. Self-reflection and communication about hiking activities, routes, personal preparation, group dynamics, safety, and fitness for hiking
11. Tying Knots Skills Charts
12. Environmental awareness
13. Introduction of wildlife animals and Tracks
14. Remedies for Insect Bites and Rashes
15. Basic injury prevention and first aid (blister prevention and management)

### **Recommended Texts**

1. Smith, S. D. (2017). *White Mountain guide: AMC's comprehensive guide to hiking trails in the White Mountain National Forest* (30<sup>th</sup>ed.). Boston: Appalachian Mountain Club Books.
2. KJ, P. (2019). *Base camp Denver: 101 hikes in Colorado's Front Range* (3<sup>rd</sup>ed.). Las Vegas, NV: Imbrifex Books.

### **Suggested Readings**

1. Skurka, A. (2017). *The ultimate hiker's gear guide: Tools & techniques to hit the trail* (2<sup>nd</sup>ed.). Washington, D.C.: National Geographic
2. Konin, J. G., & Ray, R. (2019). *Management strategies in athletic training* (5<sup>th</sup>ed.). Champaign, IL: Human Kinetics. *MJ*

The two primary forms are throwing for distance and throwing at a given target or range. The four most prominent throwing for distance sports are in track and field: shot put, discus, javelin, and the hammer throw. This course will Develop and share among members and others education, information, and leadership skills. Encourage members to promote the active participation by all youth in fun and healthy physical activities according to their interests and abilities. The training for this course is event group focused. The main focus of this course is annual planning periodization and is introduction to international competition. This course aims to development of the student biomechanics physiology psychology nutrition planning and strength concepts. Better understand of a course the participant will for the target age group this course have a greater knowledge of appropriate drills, skills, games and activities for each event. Identify some of the more common technical faults associated with each event this course have a basic understanding of a simple Coaching session.

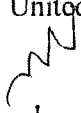
**Contents:**

- 1: Introduction to Throwing Events
- 2: Javelin throw
- 3: Preparing for Acceleration
- 4: Crossover
- 5: Begin the Throw, Complete the Throw
- 6: Hammer throw
- 7: Releasing Angle and Velocity
- 8: Body position, throwing from the power position, Drills used to teach throwing from the power position

**Recommended Texts**

- 1: McGinnis, P. M. (2020). *Biomechanics of sport and exercise* (4<sup>th</sup>ed.). Champaign, IL: Human Kinetics.
- 2: Fink, H. H., & Mikesky, A. E. (2020). *Practical applications in sports nutrition* (5<sup>th</sup>ed.). Burlington, MA, New Jersey: Jones & Bartlett Learning.

**Suggested Readings**

- 3: Bartlett, R., & Bussey, M. (2013). *Sports biomechanics: Reducing injury risk and improving sports performance*. (2<sup>nd</sup>ed.). United States. Routledge.
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Our main objective of this program seeks to emphasize the enhancement of professional abilities and skills of the students with overall leadership qualities. Through these type of practical activities and minor area games to enhance fundamental Motor Skills and their effective application in a game, basic offensive and defensive games strategies, as well as learning the importance of fair play, safe practises and cooperative involvement .We develop students' physical competence and knowledge of movement and safety, and their ability to use these to perform in a wide range of activities associated with the development of an active and healthy lifestyle. Participation in non-traditional games and activities promotes lifelong leisure, decision making, problem solving, and communication skills. We want our students will become professional in many different forms like, teachers, coaches, officials and even trainers for a gym.

### ***Contents***

1. Introduction/History of minor area games
2. Proper physical and mental activeness
3. Creative skills
4. Designing of minor area games
5. Games as medium: "Magic circle", game rules, role of choice and challenge
6. Demonstration and presentation
7. Designed games as play: varieties of games experience (easy to difficult)
8. Games such as circle ball chase, dogging, plucking the tails, leg cricket, 2-ball soccer, backboard ball and poison tag etc
9. Combat sports and tug of war
10. Coaching skills

### ***Recommended Texts***

1. Jeffreys, I., & Moody, J. (2016). *Strength and conditioning for sports performance*. Abingdon, Oxon: Routledge.
2. Kaufman, K. A., Glass, C. R., & Pincau, T. R. (2018). *Mindful sport performance enhancement: Mental training for athletes and coaches*. American Psychological Association.

### ***Suggested Readings***

1. Pirlo, A. (2014). *Andrea Pirlo: I think therefore I play*. London: BackPage Press.
2. Zeri, F., Pitzalis, S., Di Vizio, A., Ruffinatto, T., Egizi, F., Di Russo, F., & Naroo, S. A. (2018). Refractive error and vision correction in a general sports-playing population. *Clinical and Experimental Optometry*, 101(2), 225-236.
3. Clark, N. (2019). *Nancy Clark's sports nutrition guidebook*. (5<sup>th</sup> ed.) Champaign, IL; Human Kinetics.

The Sports Medicine is designed to introduce students to the science of human anatomy and physiology, various injuries of the body, and ways to care for these injuries. The students will be given a better understanding of sports medicine. This course is to provide an opportunity for the study and application of the components of sports medicine including but not limited to: organizational and administrative considerations, legal responsibilities, prevention of athletic injuries, environmental concerns, general medical, pharmacology, rehabilitation and management skills, general fitness, nutrition, sports psychology, human anatomy and physiology, therapeutic modalities, therapeutic exercise, athletics and special populations.

#### *Contents*

1. Introduction
2. Injuries in Sports
3. Prevention of Injuries
4. Exercise and Fatigue
5. Fitness Testing after Injuries
6. Rehabilitation in Sports
7. Doping in Sports

#### *Recommended Texts*

1. Madden, C., Putukian, M., McCarty, E., & Young, C. (2013). *Netter's Sports Medicine E-Book*. Elsevier Health Sciences.
2. Kasper, K. (2019). Sports training principles. *Current sports medicine reports*, 18(4), 95-96.

#### *Suggested Readings*

1. Netter, F. H. (2018). *Netter's sports medicine*. Elsevier.
2. Joyce, D., & Lewindon, D. (Eds.). (2015). *Sports injury prevention and rehabilitation: integrating medicine and science for performance solutions*. Routledge.
3. Bayles, M. P., & Swank, A. M. (Eds.). (2018). *ACSM's exercise testing and prescription*. Wolters Kluwer.
- Prentice, W. E. (2020). *Rehabilitation techniques for sports medicine and athletic training*