

**Doctor of Philosophy (Ph.D.)
Academic Curriculum**

For

PHYSICAL EDUCATION



DEPARTMENT OF PHYSICAL EDUCATION

Faculty of Education

**D.D.U. Gorakhpur University, Gorakhpur
Uttar Pradesh, India**

2024

Meeting of Board of Studies on 12.03.2024

Course Work for Ph.D. Physical Education Students based on CBCS

The course work for Ph.D. Physical Education will spread in one semester only.

Objectives

- 01.** To impart teaching and develop critical thinking ability among students about various aspects of physical education.
- 02.** To impart the knowledge of research work in existing and emerging fields in physical education and sports.
- 03.** To develop students with skills and techniques for carrying out independent research work.

Program Outcomes (POs)

- PO1.** Gaining the knowledge to carry out specialized research in various fields of Physical Education.
- PO2.** Identification of challenging and unsolved relevant problems in the field of Physical Education.
- PO3.** Generating innovation, ideas and strategies for solving research problem.
- PO4.** Motivation to uptake original research work.
- PO5.** Publication of research work and dissemination of knowledge through seminar presentations.

Program Specific Outcomes (PSOs)

- PSO1.** To provide an in-depth knowledge of Research process in Physical Education and acquainting the student with different methods of Research in Physical Education.
- PSO2.** Program is meant for enhancing the student's knowledge and understanding the detail about the specialized area he/she is interested in his/her research study.
- PSO3.** Students would gain conceptual and theoretical knowledge of research methodology in the field of Physical Education and would apply them in research of Sports and Physical Education.
- PSO4.** Student would understand the application of Sports Training, Sports Management, Yogic Practices and Sports Bio-Mechanics and would be able to apply them in their professional areas.
- PSO5.** Student would become competent enough and would acquire the advance skill of Physical Education profession.

Doctor of Philosophy (Ph.D.) Academic Curriculum

Every student admitted in Physical Education for the Ph. D. programme will be required to pass a course work of minimum 12 credits. The division of this 12 credits course work is as following:

Paper	Course Code	Course Name	Credit
I	RPE 700	Research and Publication Ethics (RPE)	1+1
II	PHED 701	Research Methodology	5
III	PHED 702	Applied Physical Education and Sports Sciences	5
		Total Credits	12

Detailed Syllabus

Course Code	Course Title	Credits
RPE 700	Research and Publication Ethics	2 (1+1)

Theory: -

1. Philosophy and Ethics: Introduction to philosophy, definition, nature and scope, concept, branches, Ethics definition, moral philosophy, nature of moral judgments and reactions.
2. Scientific conduct: Ethics with respect to science and research, Intellectual honesty and research integrity, scientific misconduct: Falsification, Fabrication and Plagiarism (FFP), Redundant publication: duplicate and overlapping publication, salami slicing, Selective reporting and misrepresentation of data.
3. Publication Ethics: definition, introduction and importance, best practices/ standard setting initiatives and guidelines: COPE, WAME, etc, conflict of interest, publication misconduct, definition concept, problems that lead to unethical behavior and vice-versa, types, Violation of publication Ethics, Authorship and contributor ship, identification of publication misconduct, complain and appeals, Predatory publisher and journals.

Practice: -

1. Open Access Publishing: open Access publication and initiatives, SHERPA/ RoMEO online resource to check publisher copyright and self-archiving policies, Software tool to identify predatory publication developed by SPPU, Journal finder/ journal suggestion tools viz. JANE, Elsevier Journal Finder, Springer Journal Suggester etc.
2. Publication Misconduct: Group Discussion regarding subject specific Ethical Issues, FFP, Authorship, conflict of Interest, complaints and appeals: example and fraud from India and abroad.
3. Software tools: Use of plagiarism software like Turnitin, Urkund and other open-source software tools
4. Databases and Research Metrics: Databases: Indexing databases, Citation database: web of Science, Scopus etc. Research Metrics: Impact factor of journal as per journal citation report, SNIP, SJR, IPP, Cite, Metrics: h-index, g-index, i10 index, altmetrics.

Suggested Readings

- (1) P. Chaddah, (2018) Ethics in Competitive Research: Do not get scooped; do not get plagiarized, ISBN:978-9387480865
- (2) Resnik, D. B. (2011). What is ethics in research & why is it important. National Institute of Environmental Health Sciences, 1-10. retrieved from <http://www.niehs.nih.gov/research/resources/bioethics/whatis/index.cfm>
- (3) Indian National Science Academy (INSA), Ethics in Science Education, Research and Governance (2019), ISBN:978-81-939482-1-7. http://www.insaindia.res.in/pdf/Ethics_Book.pdf
- (4) Bird, A. (2006)- Philosophy of Science.
- (5) MacIntyre, Alasdair (1967)- A short History of Ethics.
- (6) National Academy of Science, National Academy of Engineering and institute of Medicine (2009) On being a Scientist: A Guide of Responsible Conduct in Research.
- (7) Beall, J. (2012) – Predatory publishers are corrupting open access. Nature, 489(7415).

Course Code	Course Title	Credits
PHED 701	Research Methodology	5 (5+0)

Course Objectives:

1. To acquaint the student with Philosophy of Research in Physical Education
2. To make student understand need and importance of Research in Physical Education
3. To enable student with different data collection tools and the procedure of developing them
4. To enable the student to understand and apply different types and methods of research
5. To acquaint the student with need and importance of Research Statistics
6. To give student knowledge of fundamentals of Research Statistics
7. To enable student with different statistical tools and related procedures
8. To enable the student with writing interpretations and deriving conclusions from statistical analysis

Unit 1: Introduction

- 1.1 Meaning, Definition, Scope of Research in Physical Education & Sports
- 1.2 Aim, Objective and Characteristics of Research
- 1.3 Research for generation of knowledge & formation of theory
- 1.4 Value based research, Plagiarism, Research Ethics

Unit 2: Research Methods

- 2.1 Evaluation of Dissertation of any other researches
- 2.2 Quantitative Research
- 2.3 Qualitative Research
- 2.4 Review of related literature

Unit 3: Research Data, Data Analysis & interpretation

- 3.1 Parametric & non-parametric data
- 3.2 Data collection tools
- 3.3 Descriptive and Inferential Statistical tools
- 3.4 Interpretation of data & deriving conclusions

Unit 4: Sampling, Research Design and Computer Application

- 4.1 Meaning of Research Design, its types and importance
- 4.2 Concept of Population and Sample
- 4.3 Methods of Sampling
- 4.4 Role of computer for research in physical Education, Use of Computer based Statistical Tools.

Unit 5: IPR, Copyright & Patent

- 5.1 Intellectual Property Rights (IPR): an introduction; IP as a global indicator of innovations, Role of IPR in economic and cultural developments.
- 5.2 Types of IPR, Patents, Copyrights, Trademarks, Geographical Indications. Trade Secrets.
- 5.3 Scope of Patents in Physical Education and Sports.

Suggested Readings:

1. Barrow, H. M. (1979). *Practical Approach to Measurement in Health & Physical Education*. (3rd ed.). Philadelphia: Lee & Febiger
2. Best, J. W. & Kahn, J. V. (2006). *Research in Education*. (10th ed.). New Delhi: PHI
3. Clark, D. H. & Clark, H. H. (1979). *Research process in Physical Education, recreation & health*. Englewood Cliffs: prentice Hall.
4. Johnson, B. & Christensen, L. (2008). *Education Research, Quantitative, Qualitative and Mixed Approaches*. (3rd ed.). Sage Publication: England.
5. Miller, David. K. (2002). *Measurement by the Physical Educator*. New York: McGraw Hill companies.
6. John & Nelson (1998). *Practical Measurements for Evaluation in Physical Education*. Delhi: Surjit Publication.
7. Sprinthall, R. C. (1997). *Basic statistical Analysis*. (5th ed.). USA: Allyn & Bacon
8. Thomas, J. R. & Nelson, J. K. (2001). *Research Methods in Physical Education*, (4th ed.). USA: Human Kinetics.
9. Vincent, W. J. *Statistics in Kinesiology*. Campaign: Human Kinetics
10. Kothari, C.R., 1990. *Research Methodology: Methods and Techniques*. New Age International, 418p.
11. Garg, B.L., Karadia, R., Agarwal, F. and Agarwal, U.K., 2002. *An introduction to Research Methodology*, RBSA Publishers.
12. Day, R.A., 1992. *How to write and publish a Scientific paper*, Cambridge University Press.
13. Fink, A.,2009. *Conducting Research Literature Reviews: From the internet to paper*. Sage Publications.
14. Satarkar, S.V.,2000. *Intellectual property rights and copyright*. EssEss Publications.
15. Saxena, V.P.,2013. *Lecture Notes on Research Methodology*. Indra Publishing House.

Course Code	Course Title	Credits
PHED 702	Applied Physical Education and Sports Sciences	5 (5+0)

Unit 1

Sports Biomechanics

- Trends in Biomechanics
- Analysis of fundamental Skills and Sports Skills, Video Film Analysis
- Tools of Biomechanical Analysis

Unit 2

Sports Training

- Latest Trends in Sports Training, Talent Identification
- Load, Adaptation, and Recovery, Sports Fitness Training Methods
- Designing of Training Program, Evaluation of Training Program

Unit 3

Yogic Practices

- New Trends in Yoga
- Self-Control and Value education through Yoga
- Biological, Physiological effects of practicing Asanas and Pranayama
- Bio-chemical and Hygienic effects of practicing Shuddhi Kriya
- Cognitive and spiritual effects of practicing Meditation

Unit 4

Management in Physical Education and Sports

- New trends of Management, Modern concept of Management
- Management of Facilities in Physical Education & sports
- Management of sports, fitness and physical education policies/ facilities in government and private sectors

Unit 5

Modern Trends of Research in Allied Areas of Physical Education and Sports

- Latest Research and Innovations in sports medicine and exercise physiology
- Latest Research and Innovations in tests, measurement and evaluation
- Latest Research and Innovations in sports psychology and sports sociology
- Latest Research and Innovations in teaching physical education and coaching

Suggested Readings

1. Hay, J (1981). The Biomechanics of sports techniques. New Jersey: Prentice Hall.
2. Bunn, J. W. (1981). Scientific principles of coaching. Englewood: Cliffs. Prentice Hall.
3. McGinnis, P. M. (2005). Biomechanics of sports exercises. USA: Human Kinetics.
4. Sunderrajan, G.S. Biomechanics of sports and games. Ludhiana: Tandon Publication.
5. Susan, J. H (2003). Basic Biomechanics. (4th Edn.) McGraw Hill Publication.
6. Rajlakshmi, D. (2007). Biomechanics for sports and games. Sports EducationalTechnologies.
7. Hoffman, S.J. (2005). Introduction to Kinesiology. Human Kinesiology Publication.
8. Uppal. A. K. and Lawrence, M. P. Kinesiology. New Delhi. Friends Publication: India.
9. Knudson, D. (2007). Fundamentals of Biomechanics. Chicago, USA: Springer Publication.
10. Scott, M. G. Analysis of Human Motion. New York.
11. Singh, H. (1991). Science of sports training. New Delhi: DVS publication
12. Uppal. A. K. (2001). Principles of sports training. New Delhi: Friends publication
13. Rainer Martens (2005). Successful coaching
14. Beachel & Taylor (2006). Essentials of strength training and conditioning.
15. Iyengar, B. K. S. (1989). Light on yoga, Yoga Dipika. London: UNWIN paperbacks.
16. Kappmeir, K. L. & Ambrosihi, D. M. (2006). Instructing hatha yoga. Champaign: Human kinetics.
17. Alice, C. (2000). Yoga for sports. Chicago: CB.
18. Sawmi Kunalayan and (19930). Asanas. Lonavla: Kaivalayadham.
19. Tiwari, O. P. (2002). Asanas why & how? Lonavla: Kaivalayadham.
20. Shivananda Yoga Vedanta centre (1998). Yoga mind & body. London: D. K. paperbacks.
21. Bucher, C. A.& Krotee, M. L. (2002). Management of Physical Education of Sports, (12thEdn.). New Yark: McGraw Hill.
22. Voltmer, E.F. (1979). The organization and administration of Physical Education (5thEdn). New Jersey: Prentice Hall.
23. Parkhouse, B. L. (1991). The Management of Sports Foundation & Application St. Loup: Mosby Year Book.
24. Kamlesh, M. L. (2000). Management Concepts in Physical Education & Sports, New Delhi: Metropolitan Book Co. Pvt. Ltd.