

THE UNIVERSITY OF BURDWAN
Department of Physical Education

Syllabus of Ph.D. Coursework in Physical Education

Year	Semester	Course Code	Course Title	Credit Value	Marks Distribution
					Total Marks
1 st (Course Work)	Sem I	PHDCW-101	Research Methodology	4	50
		PHDCW-102	Sports Physiology, Psychology, and Biomechanics	4	50
		PHDCW-103	Term Papers & Related Seminar Presentation(s)	4	25 + 25 = 50
		Sub Total		12	150

Year	Semester	Course Code	Course Title	Credit Value	Marks Distribution
					Total Marks
1 st	Sem I	PHDCW-101	Research Methodology	4	50

Course Code : PHDCW-101
Course Title : Research Methodology

Unit I: Research: Meaning, Design and Methods

- Meaning, Need, Types.
- Problem formulation, Hypothesis
- Designing Research Proposal
- Methods - Scientific, Experimental, Historical, Descriptive, Survey
- Operations Research and Projective Techniques

Unit II: Research Data: Collection, Organisation, Analysis and Interpretation

- Data Collection Tools and Techniques: Sampling, Observation, Questionnaire, Interview, Schedule
- Data Organisation: Tabulation, Graphical representation
- Data Analysis and Interpretation: Statistical analysis (Including Frequency Distribution, Measures of Central Tendency, Dispersion, Standard Deviation, Correlation, Regression, Time-Series analysis)
- Measurement and Scaling Techniques
- Index Number

Unit III: Computer Applications

- Writing Research Report: Structure, Style, Contents, and Citation
- Close and Open Access Research Publications
- Electronic Theses and Dissertations
- Open source software and standards
- Search engine : Tools and Techniques
- Citation Styles, Citation Index, Index journals, referred Journal, Impact Number etc.
- Preparation for Seminar/ Conference, Abstracts, Synopsis and Presentation Techniques.
- Open access repositories and information centres in Physical Education

Reading List

1. Busha, Charles A. & Harter, Stephen P.: *Research Methods in Librarianship: Techniques and Interpretations*. New York: Academic Press, 1980.
2. Egghe, L. & Rousseau, R.: *Introduction to Informetrics: Quantitative Methods in Library, Documentation and Information Science*. Amsterdam: Elsevier, 1990.
3. Glazier, Jack D. & Hall, Peter M., eds.: *Qualitative Research in Information Management*. Englewood, CO: Libraries Unlimited, 1992.
4. Gorman, G.E. & Clayton, Peter: *Qualitative research for the information professional: a practical handbook*. 2nd ed. London: Facet Publishing, 1997.
5. Hafner, Arthur W. *Descriptive Statistical Techniques for Librarians*. 2nd ed. Chicago: American Library Association, 1997.
6. Hernon, Peter & Richardson, John V., eds.: *Microcomputer Software for Performing Statistical Analysis: A Handbook Supporting Library Decision Making*. Norwood, NJ: Ablex Publishing Corporation, 1988.
7. Kraft, Donald H. & Boyce, Bert R.: *Operations Research for Libraries and Information Agencies: Techniques for the Evaluation of Management Decision Alternatives*. San Diego: Academic Press, 1991.
8. Losee, Robert M., Jr. & Worley, Karen A.: *Research and Evaluation for Information Professionals*. San Diego: Academic Press, 1993.
9. Lynam, Peter, Slater, Margaret & Walker, Rennie: *Research and the Practitioner: Dissemination of Research Results within the Library-Information Profession*. London: Aslib, 1982.
10. Martyn, John & Lancaster, F. Wilfrid: *Investigative Methods in Library and Information Science: An Introduction*. Arlington, VA: Information Resources Press, 1981.
11. McClure, Charles R. & Hernon, Peter, eds.: *Library and Information Science Research: Perspectives and Strategies for Improvement*. Norwood, NJ: Ablex Publishing Corporation, 1991.
12. Mellon, Constance A.: *Naturalistic Inquiry for Library Science: Methods and Applications for Research, Evaluation, and Teaching*. New York: Greenwood, 1990.
13. Moore, Nick: *How to Do Research*. 2nd ed. London: Library Association,
14. Powell, Ronald R.: *Basic Research Methods for Librarians*. 3rd ed. Greenwich, CT: Ablex Publishing Corporation, 1997.
15. Prytherch, Ray: *Information Management and Library Science: A Guide to the Literature*. Brookfield, VT: Gower, 1994.
16. Slater, Margaret, ed.: *Research Methods in Library and Information Studies*. London: Library Association, 1990.
17. Stephen, Peter & Hornby, Susan: *Simple Statistics for Library and Information Professionals*. London: Library Association, 1995.

Year	Semester	Course Code	Course Title	Credit Value	Marks Distribution
					Total Marks
1 st	Sem I	PHDCW-102	Sports Physiology, Psychology, and Biomechanics	4	50

Course Code: PHDCW-102

Course Title: Sports Physiology, Psychology, and Biomechanics

Unit-I

Musculoskeletal Framework, cardio respiratory, neuromuscular physiology and exercise effect on metabolic system

- I. Orientation to the musculoskeletal physiology and exercise.
- II. Orientation to the cardio respiratory physiology and exercise
- III. Orientation to the neuromuscular physiology and exercise.
- IV. Orientation to the effect of exercise on metabolic system.

Unit-II

Applied Theories in Sports Psychological Research

- I. Meaning, importance and areas research in sports psychology.
- II. Research on Cognitive, Affective and Psychomotor domains.
- III. Application of research on Play Theory and wellness.
- IV. Research on the following psychological factors for sports performance:
- V. Motivation & Achievement Motivation.
- VI. Anxiety & Sports Competition Anxiety.
- VII. Aspiration Level.
- VIII. Emotions & Aggression.
- IX. Intelligence and Self Concept.
- X. Concentration , Attention & Interest.
- XI. Personality traits.

Unit-III

Fundamental mechanical concepts and implications in sports Force Platform

- I. Kinematics
- II. Kinetics
- III. Scope of research in sports biomechanics

Reading List

1. Zinner, Christoph, and Billy Sperlich. Marathon Running: Physiology, Psychology, Nutrition and Training Aspects. , 2016. Internet resource.
2. Harrast, Mark A, and Jonathan T. Finnoff. Sports Medicine: Study Guide and Review for Boards. , 2017. Internet resource.

3. Lees, A, Mike Hughes, and Thomas Reilly. Science and Racket Sports. , 2014. Print.
4. Swedan, Nadya. Women's Sports Medicine and Rehabilitation. Gaithersburg, Md: Aspen Publishers, 2001. Print.
5. Moorman, Claude T, and Donald T. Kirkendall. Praeger Handbook of Sports Medicine and Athlete Health. Santa Barbara, Calif: Praeger, 2011. Print.
6. McKenzie, Don, and Bo Berglund. Handbook of Sports Medicine and Science, Canoeing. Newark: John Wiley & Sons, Incorporated, 2018. Internet resource.
7. Lees, A, D Cabello, and G Torres. Science and Racket Sports Iv. London: Routledge, 2011. Print.
8. Gamble, Paul. Training for Sports Speed and Agility: An Evidence-Based Approach. London: Routledge, 2012. Print.
9. Kent, Michael. The Oxford Dictionary of Sports Science and Medicine. Oxford: Oxford University Press, 2007. Print.
10. Comparative Exercise Physiology. Cambridge, UK: Cambridge University Press, 2008. Internet resource.

Year	Semester	Course Code	Course Title	Credit Value	Marks Distribution
					Total Marks
1 st	Sem I	PHDCW-103	Term Papers & Related Seminar Presentation(s)	4	25 + 25 = 50

Course Code : PHDCW-103

Course Title : Term Papers & Related Seminar Presentation(s)