



University of Patanjali

Haridwar, Uttarakhand

Office of the Dean (Research)

Ph.D. Coursework 2023

GUIDELINES & SYLLABUS

As per Extraordinary Gadget Part III Section IV; UGC Notification for Ph.D. Regulation Dated 07/11/2022

PREAMBLE

Engagement in research work leading to a Ph.D. Degree is not only the matter of an honour and privilege but an opportunity to expanding the horizons of one's knowledge, understanding and pleasure of creation of new knowledge besides enhancing ability to creativity driven problem solving approach to serve the mankind better. The University of Patanjali is committed to and aims at providing leading edge research and development education, excellent infrastructure, and highly trained and dedicated faculty in various interdisciplinary and multidisciplinary subjects, including state of the art laboratories and sophisticated research facilities to pursue high end and socially relevant research and skill development. The campus is located in the lush green vicinity of Shivalik region of the Himalayas and offers a blissful, scenic, and conducive environment for higher studies and research.

The University of Patanjali is based on the foundations of Yogic Science, Ayurveda and Vedic Philosophy laid and guided by Hon'ble Chancellor Param Pujya Swami Ram Dev ji and Hon'ble Vice Chancellor Acharya Balkrishna ji to promote and nurture rich ancient knowledge, heritage and culture and its logical confluence with modern scientific pursuits by way of high end academics and research. The University follows the guidelines and syllabus published by the University Grants Commission (UGC) to improve quality and relevance. PhD Coursework gives students a thorough grasp of their subject topic and the ability to perform independent research. It is important on the part of the institutions to emphasise interdisciplinary and skill-based courses over subject-specific ones. Besides subject-specific courses, the new syllabus emphasises research techniques, ethics, and critical thinking. It also requires academic institutions to enable students to conduct research and speak at national and international conferences. Each student must take a minimum of one semester of pre-PhD course. Coursework is a crucial component of a doctorate programme since it lays the groundwork for both the literature review and the process of selection of the subject and topic including framing research design.

GUIDELINES

1. The Credit requirement for the Ph.D. coursework is a minimum of 12 credits, including a “Research and Publication Ethics” course and a “Research Methodology” course.
2. All Ph.D. scholars, irrespective of discipline, shall be required to train in teaching/ education/ pedagogy/ writing related to their chosen Ph.D. subject during their doctoral period. Ph.D. scholars may also be assigned 4-6 hours per week of teaching/ research assistantship for conducting tutorial or laboratory work and evaluations.
3. A Ph.D. scholar must obtain minimum 55% marks or its equivalent grade in UGC 10-point scale in coursework to be eligible to continue in the programme and submit his or her thesis.
4. The candidates must have completed Master’s Degree/ M.Phil. in respective subject from a University recognized by UGC.
5. Qualifications of faculty members of the course is Ph.D. in relevant subject/ interdisciplinary areas having 10 years' of teaching/ research experience
6. The scholars require 75% attendance in coursework classes.
7. Pedagogy includes classroom teaching, guest lectures, group discussions, practical sessions.
8. Evaluation: Continuous assessment will be done through tutorials, assignments, quizzes, and group discussions. Weightage will be given for active participation. Final written examination will be conducted at the end of the course.
9. A periodical progress report needs to be submitted by the scholar.
10. The scholars may submit their thesis 3 years after registration to the PhD., extendable up to 5 years after the registration.

COURSE STRUCTURE

No.	Course Code	Course Title	Periods		Evaluation Scheme			SEE	Course Total
			L	T/P	Seasonal				
					Credit	CT	TA		
1.	CW-RM- 01	Research Methodology	30	10	2	20	10	70	100
2.	CW-CS- 02	Computer Applications/ Statistics	30	10	2	20	10	70	100
3.	CW-RE-03	Research and Publications Ethics	30	10	2	20	10	70	100
4.	CW-PV-04	Philosophy/ Vedic Literature/	90	30	6	60	30	210	300
5.	CW-SM-05	Sanskrit/ Manuscriptology	90	30	6	60	30	210	300
6.	CW-YA-06	Yoga/ Ayurveda	90	30	6	60	30	210	300
7.	CW-PS-07	Psychology	90	30	6	60	30	210	300
	Total		180	60	12	120	60	420	600

*Courses at No. 1, 2 for all Research Scholars; No. 3, 4, 5, 6 are elective, each scholar to take one.

*CW- Course Work, L-Lecture, T-Tutorial/ Training, P-Practical (Practice/ Field), CT-Cumulative Tests, TA-Teachers Assessment, SEE-Semester End Examination.

TIMELINE

1. Pre-Ph.D. Coursework to be conducted during the 1st Semester.
2. Every scholar has to complete a 12 Credit Coursework. Of which 6 Credit Course (90 Hours) is common to all, i.e. i) Research Methodology, ii) Computer Applications & Statistics, and iii) Research & Publications Ethics. Another 6 Credit Course will be in a particular subject, i.e. i) Philosophy, ii) Sanskrit, iii) Yoga, and iv) Psychology (90 Hours each), from which scholar will select one subject as per her/ his admission preference. Thereby, everyone has to undergo total 12 Credit Course, i.e. 6 Credit Compulsory, and 6 Credit elective, total 180 hours.
3. **July 2023:** University authorities Hon'ble VC, PVC, Deans and HODs had introductory sessions, meetings, get-togethers and discussions with Research Scholars to get them acquainted with research culture and practice.
4. **August 2023:** Coursework classes with fieldwork and practical experience were conducted including 60 lectures and 16-20 hours fieldwork and practical experience, to have an appreciation of the overall research and academic environment of the University of Patanjali. It also provided them an opportunity to have trans-disciplinary perspectives and a fair grasp of the compulsory and elective subjects besides mingling with each other and developing spirit of cooperation and teamwork for their research.
5. The centralized Coursework Classes conducted in August 2023:

i)	Research Methodology	(10 Hours, remaining 20 Hours)
ii)	Computer Applications & Statistics	(10 Hours, remaining 20 Hours)
iii)	Research & Publications Ethics	(10 Hours, remaining 20 Hours)
iv)	Philosophy (Vedic Literature included)	(10 Hours, remaining 80 Hours)
v)	Sanskrit (Manuscriptology included)	(10 Hours, remaining 80 Hours)
vi)	Yoga (Ayurveda included)	(07 Hours, remaining 83 Hours)
vii)	Psychology	(03 Hours, remaining 87 Hours)
6. **September 2023:** The remaining coursework classes for compulsory subjects, i.e. i) Research Methodology, ii) Computer Applications & Statistics, and iii) Research & Publications Ethics, will be conducted centrally during September 01-30, 2023 as usual 3 lectures per day 10 am - 01 pm and a weekend field visit. The Time Table for the same is being circulated separately.
7. **September 2023:** The syllabus for the core subjects: i) Philosophy, ii) Sanskrit, iii) Yoga, and iv) Psychology, will be prepared/ finalized by the respective Head of the Departments latest by 15 September 2023, so that necessary approval of the competent authority may be obtained well in time. The Deans (Research/Academics) may be consulted for any support.

8. **October 2023:** The remaining coursework classes for elective subjects will be conducted by respective Departments during October 01-November 07, 2023, 3 lectures per day 10 am - 01 pm or 02-05 pm or as the respective Departments may deem appropriate. The respective HODs may draw programme schedule for smooth conduct of remaining coursework classes, so that all coursework classes to be completed by 07 November 2023. October has 23 working days x 3 classes each day = 69 classes in October, and there are 6 working days in the first week of November during 01-07 November 2023 x 3 classes each day = 18 classes. Now 69+18=87 Classes (87 classes are the maximum remaining).
9. **November 2023:** All scholars are required to work on a project and submit a report by the end of November 2023. It could be in the form of a Dissertation, Project Report, Research Paper, or any creative outcome. It will be evaluated and marks be awarded to form part of coursework examination.
10. **December 2023:** Examination for the coursework will be conducted and evaluation be made.
11. **January 2024 onwards:** The successful scholars would be eligible to commence their research work to be undertaken with the guidance of the respective designated Research Supervisor.
12. In view of keeping the scholars updated with latest and emerging trends in research and development and trigger an spark and interest amongst them in newer areas, the invited lectures, seminars, workshops and field visits may be planned and organized from time to time.

SYLLABUS

PAPER I (CW-RM- 01): RESEARCH METHODOLOGY

Unit I: Scientific Research and Approaches to Research Study

1. This unit focuses on the meaning and nature of science, the characteristics of scientific research, and the types of research methods. It also covers the nature of social phenomena, approaches to study.
2. Understanding Indian system of research and knowledge creation and dissemination, Indian logic, Pramana, debate and classical Vedic knowledge system.
3. Introduction to research methodology – definition of research, types of research
4. Literary research – assumption of literary research, elements and theories of literary research, types of literary research (historical research, comparative research, explanatory research and critical research)
5. Literature review – purpose, process, presentation of literature review, exploring digital source like PubMed and online databases and journals like PhilPapers, IJOY-PPP, COPAC, etc.
6. Types of data – qualitative and quantitative
7. Data collection methods – observation, interview, psychological tests, questionnaire, physiological tests

Unit II: Research Design and Planning

1. This unit covers the meaning and types of research design, the advantages of designing research, and stages for outlining a research proposal and planning for a good research project.
2. Types of Research Design – Experimental and Cross Sectional Design, Case Study, Survey
3. Problem formation and selection of research topics, sources of information, selecting research topics, types of variables and their selection, research objectives and purpose, types of research questions and their characteristics, types of hypothesis, and formulation and testing of hypothesis.

Unit III: Sampling Techniques

1. This unit covers the purposes and principles of sampling, types of sampling and sample size, qualitative and quantitative approaches, and principles of PRA and FRA techniques.
2. Sampling Methods – Population and Sample; Simple Random Sampling, Systematic Sampling, Stratified Sampling, Cluster Sampling
3. Methods of Controlling Biases – Randomization
4. Types of Variables – Independent, Dependent, Confounding Variable
5. Reliability Test – Retest Reliability, Internal Consistency, Inter Rater Reliability
6. Validity – Construct Validity, Face Validity, Content Validity, Criterion Validity, Convergent and Discriminant Validity
7. Issues of Bias and Confounding: Selection Bias, Recall Bias, Observer or Measurement Bias, Publication Bias, Randomization, Matching, Crossover Design, Restriction, Stratification

Unit IV: Recent Trends in Research

1. Consolidated statement of reporting randomized control trial (CONSORT checklist)
2. Conducting meta-analysis of published literature
3. Methods for grading evidence in healthcare
4. Writing scientific research papers
5. Science, Technology & Innovation Policies, National Education Policy, National Innovation Framework, Research and Innovation Ecosystem in India

PAPER II (CW-CS- 02): COMPUTER APPLICATION AND STATISTICS

Unit I: Computer Fundamentals

1. Types of computers
2. Input, output and storage devices
3. Software & hardware
4. Types of networks LAN & WAN
5. MS office (word, excel and PowerPoint)

Unit II: Data Analysis Software

1. Introduction statistical package for social sciences (SPSS)
2. Creating & saving a SPSS
3. Data entry in SPSS
4. Analysis of description statistics using SPSS
5. Dependent & independent using SPSS
6. One way & two analysis using SPSS
7. Correlation using SPSS

Unit III: Internet

1. Email – create, forward & send a mail message
2. World Wide Web (www)
3. Online journals
4. Searching Research articles, papers & various topics

Unit IV: Statistical Concepts – I

1. Descriptive Statistics
2. Inferential Statistics
3. Hypothesis Testing, Null Hypothesis
4. Statistics and Parameters
5. Sample and Population
6. Generalization
7. One Tailed, Two Tailed Hypothesis
8. Types of Errors and its Control
9. Central Limit Theorem

Unit V: Statistics Concepts – II

1. Point estimate and interval estimate
2. Power analysis – effect size, sample size
3. P-value
4. Confidence interval
5. Statistical tests and design
6. Assumptions of tests
7. Statistical tests for various designs – correlation, proportions, paired sample and independent sample t-tests, Chi-Square tests, ANOVA, Repeated measures ANOVA, parametric and non-parametric tests
8. Interpretation of SPSS
9. Scales of measurement – nominal, ordinal, interval, ratio

PAPER III (CW-RE-03): RESEARCH AND PUBLICATIONS ETHICS

Unit I: Philosophy and Ethics

1. Research and Publication Ethics, awareness about the publication ethics and publication misconducts, focusing on basics of philosophy of science and ethics, research integrity.
2. Introduction to philosophy: definition, nature and scope, concept, branches
3. Ethics: definition, moral philosophy, nature of moral judgements and reactions

Unit II: Scientific Conduct

1. Ethics with respect to science and research
2. Intellectual honesty and research integrity
3. Scientific misconducts: Falsification, Fabrication, and Plagiarism (FFP)
4. Redundant publications: duplicate and overlapping publications, salami slicing
5. Selective reporting and misrepresentation of data

Unit III: Publication Ethics

1. Publication ethics: definition, introduction and importance
2. Best practices / standards setting initiatives and guidelines: COPE, WAME, etc.
3. Conflicts of interest
4. Publication misconduct: definition, concept, problems that lead to unethical behaviour and vice versa, types
5. Violation of publication ethics, authorship and contributor ship
6. Identification of publication misconduct, complaints and appeals
7. Predatory publishers and journals

Unit IV: Open Access Publishing

1. Open access publications and initiatives
2. SHERPA/RoMEO online resource to check publisher copyright & self-archiving policies
3. Software tool to identify predatory publications developed by SPPU
4. Journal finder / journal suggestion tools viz. JANE, Elsevier Journal Finder, Springer Journal Suggester, etc.

Unit V: Publication Misconduct

A. Group Discussions

1. Subject specific ethical issues, FFP, authorship
2. Conflicts of interest
3. Complaints and appeals: examples and fraud from India and abroad

B. Software Tools

1. Use of plagiarism software like Turnitin, Urkund and other open source software tools

Unit VI: Databases and Research Metrics

A. Databases (4 hrs.)

1. Indexing databases
2. Citation databases: Web of Science, Scopus, etc.

B. Research Metrics

1. Hands-on-sessions to identify research misconduct and predatory publications. Indexing and citation databases, open access publications, research metrics (citations, h-index, Impact Factor, etc.) and plagiarism tools to be introduced in the course.
2. Impact Factor of journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score
3. Metrics: h-index, g index, i10 index, altmetrics

BOOKS AND WEBSITES

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15. S. Radhakrishnan (1971). Indian Philosophy (Vol 1-2). George Allen & Unwin, London. Autobiography of Sri Yogendra.
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21. S. Krishnanada. Sri Swami Sivananda and his Mission. The Divine Life Society Publication. Rishikesh.
22. Study of Nirala Literature with reference to Neo-Vedanta.
23. <http://www.consort-statement.org/>
24. <http://www.ahrq.gov/>

This issues with the approval of Hon'ble Pro VC for compliance by all concerned.



(Prof. Manoj Kumar Patariya)
Professor (Biosciences) & Dean (Research)

Dated: 30.08.2023

Copy for kind information to:

1. PS to Hon'ble Vice-Chancellor
2. Pro Vice-Chancellor
3. Registrar/ Dy. Registrar
4. Controller of Examination
5. Coordinator, IQAC
6. Dean, Academic & Research
7. Dean, Faculty of Humanities and Ancient Studies
8. Dean, Faculty of Yoga Science.
9. All Faculty Members & Coordinators
10. Dean, Student Welfare.
11. Office File.