

Ph.D. course work guidelines (Revised August – 2021)**1. Revised Structure of the “Ph.D. course work” to be undertaken by all Ph.D. students registered at S.R.T.M. University, Nanded.**

Paper	Title	Credits	Marks	Duration of Examination	Nature of Examination	Passing
Paper -1	Research Methodology	03	75	3 hrs	University	50%
Paper -2	Computer application (Section A)	02	50	2 hrs	University	50%
	Computer application (Section B)	01	25	*Continuous internal evaluation by concerned supervisor (one test of 25 marks)		50%
Paper -3	Research and Publication Ethics	02	50	2 hrs	University	50%
Paper -4	Foundation & Philosophy of Research (Based on basic knowledge of core research domain)	04	100	*Continuous internal evaluation by concerned supervisor review of literature 40 marks, reading, test and assignments 40 marks (Two test and two assignments), design of experiments/method 20 marks		50%
Paper-5	Paper on Research topic (Specific)	04	100	*Seminar / conferences / symposium participation – 1 credit (25 marks), research paper publications, – 1 credit (25 marks), workshop/ training related subject– 1 credit (25 marks), preparation of research proposal – 1 credit (25 marks)		50%

Note:

1 - *Internal evaluation shall be carried out by the supervisor (Records of evaluation are to be kept with supervisor till the award of the degree) and the consolidated marks statement should be submitted to university through the research centre

2 – Research student must pass in paper no. 1, 2, 3 of pre Ph.D. course work to qualify for submission of pre synopsis for confirmation of registration and research topic by concern RRC and other evaluation related to Paper No.4 and 5 (internal evaluation to be carried out by supervisor) to be submitted before submission of final Ph.D. synopsis to the university.

3 – The above revised structure shall be applicable to the research students to whom supervisor have been allocated by RAC after PET 2020 and onwards

4 – As per university circular dated No. PG/2011-12/45 dated 22/06/2021, exemption will be given to the students who have passed M.Phil. Examination with subject Research Methodology and Computer application/ Information Technology

Syllabus

Paper – 1: Research Methodology:

Paper -1	Research Methodology	(Credits – 03)	(Marks -75)	Examination Duration: 3 hrs
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Objective:

- To enable to student to understand and work methods and concepts related Research.
- To enable the student to develop research proposal and to work with research problem.
- To develop broad comprehension of research area.

Unit 1: Introduction

Meaning, Concept, nature steps types and characteristics of research. Scientific Inquiry Philosophical and Sociological foundations of research Interdisciplinary approach and its implications in various research area.

Unit 2: Methods of Research:

Qualitative and quantitative methods of research like Historical, case study, ethnography, ex post facto, documentary and content analysis, survey (Normative, descriptive, evaluative etc.) field and laboratory experimental studies.

Characteristics of methods and their implications in research area.

Unit 3: Development of research proposal:

Research proposal and its elements

Formulation of research problem-criteria of sources and definition Development of objectives and characteristics of objectives.

Development hypotheses and applications.

Unit 4: Methods of data collection:

Concept of sampling and other concepts related to sampling.

Probability and non-probability samples, their characteristics and implications. Tools of data collections, their types, attributes and uses.

Redesigning, research tools-like questionnaire, opinnaere, observation, interviews, scales and tests etc.

Unit 5: Methods of data analysis:

Analysis of qualitative data based on various tools.

Analysis of quantative data and it presentation with tables, graphs etc.

Statistical tools and techniques of data analysis-measures of central tendency, dispersion. Decision making with hypothesis testing through parametric and non parametric tests.

Validity and delimitations of research findings.

Unit 6: Report writing and evaluations:

Principles of report writing and guide lines according to style manuals.

Writing and presentation of preliminary, main body and reference section of report. Evaluation of research report.

References:

- Bajpai S. R. (1975) Methods of Social Survey and Research, Kitabghar, Kanpur.
- Hans Raj (1988) Theory and Practice in Social Research, Surjeet Publication, Kolhapur.
- Krishnaswami O. R. (1988) Methodology of Research in Social Science, Himalaya Pub. House.
- Sadhu, Singh, Research Methodology in Social Science
- Bhandarkar, Research Methodology
- Kothari, C. R. (2005) Quantitative Technique, New Delhi, Vikas Publication House.
- Gautam, N. C. (2004) Development of Research tools, New Delhi, Shree Publishers.
- Gupta, Santosh (2005) Research Methodology and Statistical Techniques, Deep and Deep Publications.
- Chandra A. and Sexena T. P. (2000) Style Manual, New Delhi, Metropolitan Book Comp. Ltd.
- Shukla, J. J. (1999) Theories of Knowledge, Ahmadabad, Karnavati Publication.
- Bhattacharya, D. K. (2004) Research Methodology, New Delhi, Excel Books.
- Brymann, Alan and Carmer, D. (1995) Qualitative data analysis for social scientist, New York, Routledge Publication.
- Best J. W. and Khan J. V. (2005) Research in Education New Delhi, Prentice Hall India.

Question Paper Pattern for University Examination

Paper – 1: Research Methodology (Question paper pattern)		
Marks: 75		Duration: 3 hrs
N.B. : <ul style="list-style-type: none">• Attempt any five questions• Question no. 1 is compulsory• Of the remaining attempt any four questions• All questions carry equal marks		
Q.1	write short notes on (Any three out of five)	15 marks
Q.2	Descriptive question	15 Marks
Q.3	Descriptive question	15 Marks
Q.4	Descriptive question	15 Marks
Q.5	Write brief note on (a) (b)	15 Marks
Q.6	Descriptive question	15 Marks
Q.7	Descriptive question	15 Marks
Q.8	Descriptive question	15 Marks

Note for Paper setter: There will be 8 questions in the question paper each of 15 marks, of which 5 questions will have attempt. Q. No.1 is compulsory question with 3 short notes, each of 5 marks covering the entire syllabus. The remaining 7 questions shall cover the entire syllabus/bits, of which any 4 will have to attempt. One question shall be of semi-detailed (brief) note type with 2 bits from a part of syllabus.

Paper – 2: Computer applications

Paper	Title	Credits	Marks	Duration of Examination	Nature of Examination
Paper – 2	Computer applications (Section A)	02	50	2 hrs	University
	Computer applications (Section B)	01	25	*Continuous internal evaluation by concerned supervisor (one test of 25 marks)	

Section A: General Applications (2 credit) (50 marks)

- MS Word: Save documents as files, Arrange the files in folders, Print, Formatting, Insert, Page Layout, References [citation & bibliography], Review [comments, tracking, compare], converting to .pdf., etc.
- MS Excel: To use as a Research database and other applications related to ‘Research Topic’, if any.
- MS Power Point Presentation
- Marathi / English Word Processing; spell check, etc.

Section-B: Subject Oriented Computer Applications (1 credits) (25 marks)

[To be completed by ‘Research Supervisor’]

- Use of Internet for Research Activities
- Use of ‘On-line Journals’ for Research Activities
- Using search engines, using INFLIBNET, JSTOR, Springer, etc. Using Virtual Libraries, communicating with scholars through Lists, Groups, and other Internet resources helpful for scholastic activities.
- Concepts related to Social Sciences, Commerce, Management, Arts, Education, Physical Education, Pharmacy, Law, Science research
- Computer Applications, Softwares, related to ‘Research Topic’ are to be designed and demonstrated by the supervisor.

The significance of critical thinking and knowledge development for the profession will be emphasised throughout. The course will involve understanding and application of qualitative and quantitative research. The course will include analysis of the research methods commonly used in the concerned faculty in which student is pursuing his/her research work. The student will be introduced to issues that arise in carrying out research. This will enable the Research student to examine the research process through the lens of applications of computers in the research field.

Completion of this section B is considered as the part of the Research Guidance and it will be mandatory for the guide to complete the course work for this half. Further, it shall be the responsibility of the Supervisor to assess the performance and the ‘Computer Skills’ developed by the Research Student. The statement of marks scored by the student shall be submitted to university (Director, BoEE) through Research Centre. The reports of all the components shall be preserved by the Research Centre.

Paper – 2: Computer Applications (Question paper pattern)		
Marks: 50		Duration: 2 hrs
N.B. : <ul style="list-style-type: none"> • Attempt any three questions • Question no. 1 and 5 is compulsory • Of the remaining attempt any one questions 		
Q.1	write short notes on (attempt any four out of five) (a) } (b) } (c) } Covering entire syllabus (d) } (e) }	20 marks
Q.2	Descriptive question	20 Marks
Q.3	Descriptive question	20 Marks
Q.4	Descriptive question	20 Marks
Q.5	Write brief note on (a) (b)	10 Marks

Paper -3: Research and Publication Ethics

Paper	Title	Credits	Marks	Duration of Examination	Nature of Examination
Paper -3	Research and Publication Ethics (Course code RPE)	02	50	2 hrs	University

Syllabus

Section A

Unit 1: Philosophy and Ethics (5 hrs.)

1. Introduction to philosophy: definition, nature and scope, concept, branches
2. Ethics: Definition, moral philosophy, nature of moral judgements and reactions

Unit 2: Scientific Conduct (6 hrs.)

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 3: Publication Ethics (10 hrs.)

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 contributorship.
6. Identification of publication misconduct, complaints and appeals
7. Predatory publishers and Journals

Section B

Unit 4: Open Access Publishing (4 hrs.)

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 Suggested, etc.

Unit 5: Databases, Software Tools and Research Metrics (5 hrs.)

A. Databases (2 hrs)

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

B. Software tools (2 hrs)

Use of Plagiarism software like Turnitin, Urkund and other open source software tools

C. Research Metrics (1 hrs)

1. Impact Factor of journal as per Journal citation Report, SNIP, SJR, IPP, Cite Score
2. Metrics: h-index, G index, i10 index, altmetrics

References

- Bird, A. (2006) Philosophy of Sciences, Routledge.
- MacIntyre, Alasdair (1967) A Short History of Ethics, London.
- P. Chaddah, (2018) Ethics in competitive Research: Do not get scooped: do not get plagiarized, ISBN:978-938748086
- National Academy of Sciences, National Academy of Engineering and Institute of Medicine. (2009) on Being a Scientist: A Guide to Responsible Conduct in Research: Third Edition National Academies Press.
- Resnik, D.B. (2011). What is ethics in research & Why is it important. National Institute of Environmental Health Sciences, 1-10 Retrieved from <https://www.niehs.nih.gov/research/resources/bioethics/whatis/index.cfm>
- Beall, J. (2012) Predatory publishers are corrupting open access. Nature, 489(7415), 179-179. <https://doi.org/10.1038/489179a>
- 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

Paper - 3: Research and Publication Ethics (Question paper pattern)		
Marks: 50		Duration : 2 hrs
Section A		
Q.1	write short notes on Unit 1 (Attempt any one out of two)	05 marks
Q.2	Essay type question on Unit 2 with an internal choice	10 Marks
Q.3 (a)	Essay type question on Unit 3 with an internal choice	10 Marks
(b)	write short note on any one out of two based on Unit 1, Unit 2, Unit 3	5 Marks
Section B		
Q.4.	Essay type question on Unit 4 with an internal choice	10 marks
Q.5.	Essay type question on Unit 5 with an internal choice	10 marks

Format for submitting the internal marks to the University:

Swami Ramanand Teerth Marathwada University, Nanded

Internal Marks (Confidential)

1.	Name of the Research Student	:	
2.	Name and address of Research Supervisor	:	
3.	Mobile Number	:	
4.	Name of Research centre	:	
5.	Approved Title of Ph.D. Research work	:	
6.	Date of Registration	:	
7.	Subject	:	
8.	Faculty	:	

Consolidated Ph.D. Course work marks (internal) obtained by the candidates

Paper No.	Title of Paper	No. of Credit	Maximum Marks	Marks obtained
Paper - 1	Computer applications	01	25	
Paper - 4	Foundation & Philosophy of Research (Based on basic knowledge of core research domain)	04	100	
Paper - 5	Paper on Research topic (Specific)	04	100	

Name and signature of supervisor

Date:

Place:

Forwarded by Director/Principal
(With Seal)
