Ph.D. Regulations 2025 for PhD in Naturopathy

(Regulations for the academic year 2025-26 onwards)

Preamble

To incorporate the guidelines issued by UGC vide Notification dated 5th May 2016, No.F.1-2/2009(EC/PS)V(I) Vol(II), the following amendments have been made in the regulation for Ph.D. Course of S-VYASA (Deemed to be University). Hence this amended regulation for the Ph.D. program in Naturopathy.

Short title, Application and Commencement.

These regulations shall be called 'Ph.D. Regulations 2021'. These regulations shall come into force from August 1, 2021 with acceptance of the Board of Management.

Definitions:

In these Regulations unless the context requires otherwise, or it is specifically so defined:

a) GOI means 'Government of India' in abbreviated form.

b) GOK means 'Government of Karnataka' in abbreviated form.

c) UGC means 'University Grants Commission' established at New Delhi by an Act of Parliament in 1956.

d) S-VYASA (Deemed to be University) means 'Swami Vivekananda Yoga Anusandhana Samsthana', with its headquarters at Bangalore, Karnataka.

e) S-VYASA-RET means S-VYASA Research Entrance Test conducted by the University for preparing the merit list of candidates for admission to the Ph.D. course.

f) Admission Committee means 'a committee constituted by the University to carry out the activities concerning the admission of candidates to the Ph.D. Course'.

g) Coursework means 'the programs prescribed as a part of the Ph.D. Course, which all the candidates shall complete as a pre-requisite.

h) Research work means ‘the research work/project carried out by the candidate during his Ph.D. course’.

i) Research Supervisor means ‘a qualified faculty member / scientist recognized by the University to supervise/ guide the Ph.D. candidates.

j) Co-Research Supervisor means ‘the additional Research Supervisor who supervises/guides the doctoral research of a candidate along with the Research Supervisor’.

k) Research Advisory Committee (RAC) means ‘the Committee constituted by the University to review the research progress of a research scholar’.

Viva Voce Board means ‘a committee of experts appointed by the University to conduct the final viva-voce on the Thesis submitted by the candidate’.

Duration of the Ph.D. Course:

1.1 . Ph.D. Program in Naturopathy shall be for a minimum duration of three years including course work and a maximum of six years.

1.2 Under special circumstances, provision for extension beyond the above limits, subject to a maximum of one year, shall be granted on the recommendation of the High-Power Committee and approved by the Vice-Chancellor.

1.3 The women candidates and Persons with Disability (more than 40% disability) may be allowed a relaxation of two years for a Ph.D. in the maximum duration, including Maternity Leave/Childcare Leave once in the entire duration of the Ph.D. course.

School offering Ph.D. in Naturopathy:

The University shall permit the registration for a Ph.D. in Naturopathy through the School of Yoga and Naturopathic Medicine. A candidate is allowed to pursue a Ph.D. program in a subject area of inter-disciplinary nature subject to approval from the Research Advisory Committee (RAC).

Eligibility criteria for admission to Ph.D. in Naturopathy.

The eligibility requirement for candidates to get admitted to the Ph.D. in Naturopathy shall include the following:

- Bachelor of Naturopathy and Yogic Sciences (BNYS) from any University recognized by the UGC will be the mandatory requirement for PhD in Naturopathy with 55% aggregate marks.
- Any postgraduate degree following BNYS from a recognized University with 55% aggregate marks.
- UGC-NET qualification in relevant discipline will be preferred.

1.1 Relaxation of Marks for special categories.

A relaxation of 5% of marks, from 55% to 50%, or an equivalent relaxation of grade, may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/Differently - Abled and other categories of candidates as per the decision of the Commission from time to time, or for those who had obtained their Master's degree prior to 19th September, 1991. The eligibility marks of 55% (or an equivalent grade in a point scale wherever grading system is followed) and the relaxation of 5% to the categories mentioned above are permissible based only on the qualifying marks without including the grace mark procedures.

Admission Procedure

1.2 Entrance Test

- Selection of candidates for Ph.D. Course will be based on qualifying in the national level entrance test conducted by S-VYASA (Deemed to be University).
- A candidate shall be declared to have passed the entrance test if he/ she scores at least 50% of the marks in the entrance test.

1.3 Interview

- Candidates who have passed the entrance test shall appear for an interview conducted by the Admission Committee where the candidate will be assessed for depth of knowledge, research potential and personality.
- The Research Supervisors having vacancy of research students under them will select the candidates depending on their field of research work.
- The selected student list will be announced along with the guide names after the interview by the Admissions Committee and Division wise selected list will be announced and communicated to the candidates.
- Those who have passed NET (National Eligibility Test) in relevant discipline need not write the entrance test, but have to appear for interview with a brief synopsis of their intended research topic.
- The validity of the pass in entrance examination for Ph.D. course is valid for one academic year only, after which the candidate has to undergo the process of admission again.

Recognition and Allocation of Research Supervisor

1. Any regular Professor of S-VYASA, Deemed to be University with a Ph.D. degree and at least five research publications in refereed journals and any regular Associate/Assistant Professor of S-VYASA, Deemed to be University with a Ph.D. degree and at least two research publications in refereed journals after his/her Ph.D. may be recognized as Research Supervisor.
2. Provided that in areas/disciplines where there is no or only a limited number of refereed journals, the Research Advisory Committee of the University may relax the above condition for recognition of a person as Research Supervisor with reasons recorded in writing.
3. Co-Research Supervisor can be allowed in inter-disciplinary areas from other Divisions of the University or from other related institutions with the approval of the Research Advisory Committee. Co-Research Supervisors should have a Ph.D. or MD with a minimum of 2-post doctoral publications and 2-years of experience.

The reallocation of Research Supervisor for a selected research scholar, in case the allotted Research Supervisor leaves the university or any other emergencies shall be decided by the division concerned depending on the number of vacancy of scholars per Research Supervisor, the available specialization among the Research Supervisors and research interests of the scholars as indicated by them at the time of interview.

4. In case of topics which are of inter-disciplinary nature where the Division concerned feels that the expertise in the Division/Department has to be supplemented from outside, the Division may appoint a Research Supervisor from the Division itself, who shall be known as the Research Supervisor, and a Co-Supervisor from outside the Division/ University on such terms and conditions as may be specified and agreed upon by the consenting Institutions/Colleges.
5. A Research Supervisor/Co-supervisor who is a professor, at any given point of time, cannot guide more than Eight (8) Ph.D. scholars. An Associate Professor as Research Supervisor can guide up to a maximum of Six (6) Ph.D scholars and an Assistant Professor as Research Supervisor can guide up to a maximum of four (4) Ph.D. scholars, including reservation category.

6. A candidate cannot change his/her Research Supervisor /Co-Research Supervisor during his/her complete Ph.D. course except in case of emergency, approved by RAC.

Ph.D. Process

1.4 Course-Work:

1. The Ph.D. Course work shall comprise of two mandatory subjects prescribed by UGC, one subject on “Research Methodology”, one on the subject “Research and Publication Ethics”. The other subjects shall include advanced level programs duly approved by the Research Advisory Committee.
2. The Division where the scholar pursues his/her research shall prescribe the subject(s) to him/her based on the recommendations of the Research Advisory Committee.
3. Grades in the course work, including Research Methodology and Research Publication Ethics subjects shall be finalized after a combined assessment by the Research Advisory Committee and the Division and the final grades shall be communicated to the candidate.

4. A Ph.D. scholar has to obtain a minimum of 50% of marks in the Course work in order to be eligible to continue Ph.D. program and submit the dissertation/thesis. Note that every subject should be passed within two attempts, otherwise his/her admission to Ph.D. program stands cancelled.
5. Candidates failing to fulfil the above requirements are liable to get their registration automatically cancelled and no further extension will be permissible for completing the course work. Such candidates are free to apply for re-admission into Ph.D. afresh.

1.5 Semester Progress Reports:

1. A research scholar shall appear before the Research Advisory Committee once in six months (every semester) to make a presentation of the progress of his/her work for evaluation and further guidance. The semester progress reports shall be submitted by the Research Advisory Committee to the Ph.D. Department with a copy to the research supervisor.
   In case the progress of the research scholar is unsatisfactory, the Research Advisory Committee shall record the reasons for the same and suggest corrective measures. If the research scholar fails to implement these corrective measures, the Research Advisory Committee may recommend to the University, with specific reasons, for cancellation of the registration of the research scholar.
2. If the Ph.D. research scholar fails to submit the two consecutive progress reports or abstains from presentation of progress report, the RAC may recommend for cancellation of the registration of the research scholar.
3. If the research scholar fails to complete the entire Ph.D. work including the submission of thesis within the stipulated period, the registration of the research scholar shall be cancelled as per the university regulations.

1.6 Journal-Club presentations:

1. It is mandatory to present 4 published research papers related to the topic of research to the Journal Club for the completion of the Ph.D. course. Students are suggested to present at least two research papers before their Pre-synopsis presentation.
2. The presentation will be conducted division wise, under the presence of Research Supervisors,

Deans and other Ph.D. scholars and faculties. The presentation schedule will be communicated by the Division In charge for JC presentation, at the beginning of each semester.

3. Scholars should select only the published papers from high impact factor journals or the best journal related to their area of research.
4. Research scholars who are involved in theoretical research, can present critical review of Books /Articles related to their topic of research in JC.
5. The selected papers / books should be approved by the Research Supervisor before presentation.

1.7 Pre-Synopsis Presentation:

1. Ph.D. scholar should complete his/her Course-work and is also suggested to complete 2-JC presentations before Pre-Synopsis presentation. The Research Supervisor shall submit the Pre-synopsis document of Student's Research Proposal to the Comprehensive Project Evaluation Board (CPEB) for approval through e-mail: cpeb@svyasa.edu.in

   ☞ Research Proposals submitted until 10th of every month will be evaluated by Sub-committees.

   ☞ The Final report of CPEB along with recommendations on technical and ethical aspects will be shared with the member secretary of IEC and the respective Research Supervisors.

   ☞ The Research proposal, incorporating the changes as recommended, shall be approved by CPEB.

2. After CPEB approval, research supervisor shall request Ph.D. office in the prescribed format for Pre-Synopsis presentation in the presence of Research Advisory Committee, by submitting the below documents
   i. CPEB approval.
   ii. One hard copy of Pre-Synopsis with spiral binding (duly signed by Research Supervisor)
   iii. Soft-copy of the Pre-Synopsis document.
   iv. Soft-copy of the Power Point Presentation of Pre-Synopsis.

v. Soft-copy of the CV with a color photo of the External Expert.

vi. Ph.D. office will take minimum 15 working days for further processing.

3. The duration of presentation will be 20 minutes, followed by 10-minutes Questions/Answers and discussion. First interaction is by the external expert and then by others.
4. Any suggestions / remarks by the Research Advisory Committee have to be incorporated into the Pre-Synopsis document. The revised soft-copy of the Pre-Synopsis document should be submitted by the Research Supervisor to the Ph.D. office, after getting the approval of the external expert. Ph.D. office will then provide the RAC clearance certificate. Then, Ph.D. scholars shall proceed for IEC approval.

1.8 IEC Approval and Data Collection:

1. Following the approval of Pre-Synopsis, the candidate shall present the required design and plan of action to IEC for approval in the format provided by IEC.
2. The IEC meeting will be tentatively conducted once in 2 months.
3. Candidate must follow the template provided by the IEC. Please refer the Institute website for IEC guidelines.
4. Students have to upload all the documents in the prescribed format on the IEC website. svyasa.edu.in/login. php
5. The presentation date will be fixed by the IEC and the same will be conveyed to the students.
6. Presentation, following the prescribed format (available in the link above), will have to be done in front of IEC. Further, comments will have to be provided by the students for the clarifications sought by the IEC (if any) during presentation.

7. Further to approval of the clarifications provided by the student to the IEC, clearance certificate will be issued to the student.
8. After the IEC approval, the candidate should register his/her Research proposal in the CTRI (Clinical Trials Registry - India) website, before proceeding with Experimental work.
9. For research proposals not involving Human subjects/ Theoretical research, IEC approval is not required. So, CTRI registration is also not required. But they have to get NOC from IEC,

after screening through the CPEB committee.

Ph.D. (Naturopathy) - Coursework – Credits and Syllabus

Credits in Ph.D. – Course Work

THEORY						
Course Code	**Name of the Course**	**Credits**	**Lecture/ Practical (Hrs/week)**	**Exam in Hrs**	**IA**	**Exam**
101T	Scientific Basis of Naturopathy	2	2	3	50	50
102T	Clinical Naturopathy	3	3	3	50	50
103T	Research Methodology	4	4	3	50	50
104P	Tools and Techniques in Naturopathy Research	2	4	3	50	50
201P	Statistical Analysis and	2	4	3	50	50

	Modelling					
202T/P	RAC Recommended -Subject	4	4	3	50	50
203T	Research Communication and Publication Ethics	3	3	3	50	50
	Total	**20**	**24**		**350**	**350**

Curriculum for Course Work

Ph.D. Naturopathy

Course Code	Name of the Course	Number of Credits	Total number of hours
PhDN101T	Scientific Basis of Naturopathy	2	30

Course Outcomes:

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

1. Understand the scientific basis of core naturopathic principles and therapies.
2. Critically appraise evidence related to naturopathic modalities.
3. Integrate naturopathic clinical practices with current biomedical and integrative health approaches.
4. Design and evaluate research relevant to naturopathic interventions.

Unit 1: Foundations of Scientific Naturopathy **5 hrs**

- Evolution from traditional healing to scientific framework
- Core principles (e.g., Toxemia theory, Vitality, Nature Cure Diet)

Unit 2 : Evidence-Based Naturopathic Practice **10 hrs**

Evidence based practice of

- Hydrotherapy & Mud Therapy
- Nutritional, Dietetics and Fasting Therapy
- Acupuncture and Energy Medicine (Chromotherapy & Magnetotherapy)
- Manipulative Therapies

Unit 3: Recent Trends in Naturopathy Practice **10 hrs**

- Detoxification and Elimination in Naturopathy
- Scientific perspectives on detox, gut health, microbiome, circadian regulation
- Naturopathy as Lifestyle Medicine
- Naturopathy as Preventive medicine
- Salutogenesis through Naturopathy

Unit 4: Naturopathy in Public Health and Integrative Medicine **5 hrs**

- Safety, ethical considerations, integration in public health
- Role in non-communicable disease (NCD) management
- Naturopathy as part of AYUSH framework
- Naturopathy in Integrative medicine: policy and implementation

References:

- Lindlahr, H. (1919) Nature Cure: Philosophy & Practice Based on the Unity of Disease & Cure. (Vol. 1) Nature Cure Publishing Company
- Nair, PMK (2022) The scientific Naturopath: A Leap into the Evidence behind Naturopathy Philosophies. Blue Rose Publishers
- Pizzorno, JE. & Murray MT. (2020) Textbook of Natural Medicine (5th Edition). Elsevier Publication
- Pizzorno, JE. & Murray MT. (2025) The Clinicians handbook of Natural Medicine (3rd edition). Elsevier Publication
- World Health Organization (2010) Benchmarks for training in traditional / complementary and alternative medicine: benchmarks for training in naturopathy. World Health Organization
- Peer-reviewed papers on Naturopathy published in indexed journals

Course Code	Name of the Course	Number of Credits	Total number of hours
PhDN102T	Clinical Naturopathy	3	45

Course Outcomes:

At the end of this course, the student will be able to:

1. Apply advanced naturopathic clinical reasoning and diagnostic skills.
2. Integrate naturopathic therapies with modern clinical practices in managing diseases.
3. Design and assess individualized patient-centered care plans.
4. Critically analyze clinical evidence in naturopathy and generate research questions.
5. Navigate interdisciplinary referrals, safety, and ethical issues in clinical practice.

Unit 1: Clinical Philosophy in Naturopathy **5 hrs**

- Therapeutic Order
- Naturopathic clinical principles and hierarchy of healing
- Clinical consultation process in naturopathy
- Pathophysiology and psychoneuroimmunology of diseases

Unit 2: Naturopathic Diagnosis and Assessment **5 hrs**

- Traditional and modern diagnostic tools
- Iridology & Facial Diagnosis
- Vitality, tongue and nail diagnosis
- Integration with biomedical assessment (labs, imaging)

Unit 3: System-wise Clinical Naturopathy **20 hrs**

- Gastrointestinal disorders
- Metabolic disorders
- Liver and detoxification strategies
- Respiratory, cardiovascular, and musculoskeletal disorders

- Naturopathic care for hypertension, arthritis, back pain
- Women's health, reproductive health, skin disorders
- Naturopathic approaches in infertility, PCOS, eczema
- Psychological and psychosomatic disorders

Unit 4: Applied Naturopathic Medicine **15 hrs**

- Acute Emergency Management in Naturopathy
- Wellness and Preventive medicine
- Lifestyle medicine
- Functional medicine
- Geriatric medicine
- Rehabilitation medicine
- Antenatal management
- Occupational health

References:

- Saris J & Wardle J. (2019). Clinical Naturopathy: An Evidence-based Guide to Practice. Elsevier Publication
- National Institute of Naturopathy (2017) Clinical Naturopathy-Yoga (1st Edition). National Institute of Naturopathy
- Saris J & Wardle J. (2017). Clinical Naturopathy: in practice. Elsevier Publication
- Peer-reviewed publications on Naturopathy, published in indexed journals
- Real-world case documentation from Arogyadhama

Course Code	Name of the Course	Number of Credits	Total number of hours

PhDN103T	Research Methodology	4	60

Course Outcomes:

At the end of this course, the student will be able to:

1. Understand the methodology of medical and psychological research
2. Understand the basics of Statistics using medical and psychological data.
3. Learn to summarize data numerically and graphically

Unit 1: Research Methodology – Basic Principles **15 hours**

1. Introduction to research methodology – definition of research, types of research, need for research related to Yoga

   The research process – first steps:

   - Identifying the problem.
   - Reviewing literature.
   - Setting research questions, objectives, and hypotheses.
   - Literature review – Using PubMed, Google Scholar, Shodhganga, S-VYASA Digital library

Unit 2: Working with Data **30 hours**

- Choosing the study design.
- Choosing the sampling Techniques.
- Collecting data.
- Summarizing data.
- Testing hypotheses
- Writing a report.
- Understanding two important terms: Population and Sample
- Describing your sample: Descriptive statistics
- Generalizing from sample to population: Inferential statistics

- Using statistical analysis packages for data analysis and interpretation

Unit 3: Working with Qualitative Data **15 hours**

- Measurement tools: Observation, questionnaire, interviews
- Reliability: Test-Retest Reliability, Split-half reliability and Cronbach's alpha, McDonald's omega, Internal Consistency, Inter-rater Reliability
- Exercises: Calculating reliability coefficients for questionnaire data in R
- Validity: Content Validity, Criterion Validity, Construct Validity, Face Validity, Convergent and Discriminant Validity.

References:

1. Zar, J. H., & Zar. (1999). Biostatistical Analysis. Pearson Education. New Delhi
2. C R Kothari. (2009). Research Methodology: Methods and Techniques. New Age International (P) Ltd. New Delhi
3. Andy Field. (2005). Discovering statistics using SPSS/ R. SAGE Publications India Pvt Ltd, New Delhi
4. R. L. Bijlani. (2008). Medical Research: All You Wanted to Know But Did Not Know Who to Ask. Jaypee Brothers Medical Publishers Pvt. Ltd. New Delhi

Course Code	Name of the Course	Number of Credits	Total number of hours
PhDN104P	Tools and Techniques in Naturopathy Research	2	60

Course Outcomes:

At the end of the course, the student will be able to:

1. Select appropriate tools for clinical and experimental research in naturopathy.
2. Apply validated measurement techniques for assessing biological, physiological and psychological outcomes.
3. Design and pilot interventions for naturopathic therapies in research settings.
4. Document, analyze, and interpret research data using appropriate methods.

Unit 1: Psychophysiology Lab **15 hours**

- Principles and data collection of Heart Rate Variability, Galvanic Skin Resistance, Spirometry, Body Composition Analysis, Gas Analysis, Exercise Physiology Testing, Autonomic Regulation Testing, Telemetric Exercise Physiology Devices.

Unit 2: Cognitive Neuroscience Lab **15 hours**

- Principles of neurophysiology and data collection using EEG (Electroencephalography), functional Near Infrared Spectroscopy (fNIRS), Transcranial Doppler (TCD)

Unit3: Psychology Lab **15 hours**

- Overview of major psychological perspectives (behavioral, cognitive, humanistic, etc.).
- Overview of DSM-5, with a focus on spectrum of psychological disorders
- Basics of psychological tests
- Introduction to Inquisit/PEBL software

Unit 4: Molecular Biology Lab **15 hours**

- Principles and data collection methods for DNA Isolation & Transformation, PCR, Real time PCR, Electrophoresis (DNA), Sodium Dodecyl Sulfate Gel Electrophoresis/Western Blotting Technique, Cell Culture, Colorimetry & ELISA, Flow Cytometry

References:

1. Potter, R. F., Bolls, P. (2012). Psychophysiological Measurement and Meaning: Cognitive and Emotional Processing of Media. United Kingdom: Taylor & Francis.
2. Imaging in Neuroscience: A Laboratory Manual. (2011). United States: Cold Spring Harbor Laboratory Press.
3. Miller, H. B., Witherow, D. S., Carson, S. (2011). Molecular Biology Techniques: A Classroom Laboratory Manual. Netherlands: Academic Press.
4. Buckley, C. A. (2015). Psychology Laboratory Manual: A Research-Based Introduction to Psychological Science. United States: Kendall Hunt Publishing Company.

Course Code	Name of the Course	Number of Credits	Total number of hours
PhDN201P	Statistical Analysis And Modelling	2	60

Course outcomes:

At the end of the course, the student will be able to:

1. Perform hypothesis testing using t-tests, ANOVA, and ANCOVA based on data assumptions.
2. Differentiate between parametric and non-parametric tests and check assumptions like normality using diagnostic tools (e.g., QQ plot).
3. Conduct and interpret tests for independence including Chi-square and McNemar's tests.
4. Build and interpret simple and multiple regression models with diagnostics and model fit evaluation.

5. Apply regression techniques to conduct mediation and moderation analyses using approaches like Baron-Kenny and Hayes' PROCESS framework.
6. Prepare and present statistical reports for all analyses.

Unit 1 - Tests for Means **15 hours**

- Hypothesis testing
- Diagnostics - Deciding on which statistical test to use. Parametric vs. Non-parametric tests.
- Issues with normality testing. Using the QQ Plot.
- Paired samples tests Independent samples tests
- Report writing for paired and independent samples tests
- One-Way ANOVA Introduction to ANCOVA
- Introduction to Repeated-Measures ANOVA Assumptions for ANOVA
- Non-normal data
- Report writing for ANOVA

Unit 2 -Tests for Independence **15 hours**

- Chi-Square test for Goodness-of-Fit
- Chi-Square Test for Independence
- Assumptions for the chi-square tests
- McNemar's test for paired nominal data
- Report writing for Chi-square and McNemar's tests

Unit 3 - Simple Predictive Models – Regression **15 hours**

- Simple linear regression - prediction
- Multiple regression – understanding model fitting and R^2 Simple diagnostics for regression models
- Interactions between predictor variables
- Report writing for Regression models

Unit 4 - Applications of Regression Modeling **15 hours**

- Understanding Mediation and Moderation in Psychology studies
- The Baron-Kenny approach
- Mediation using regression
- Understanding interaction terms in a regression model Moderation using regression
- Report writing for mediation, moderation. Examples from Hayes' book.

References:

1. Bowers, D. (2008) Medical Statistics from Scratch - An Introduction for Health Professionals. Wiley-Interscience.
2. Matthews, DE & Farewell, VT. (2007) Using and Understanding Medical Statistics. S Karger Ag.
3. Coolican, H. (2024) Research Methods and Statistics in Psychology (8th Edition). Taylor & Francis
4. Knussen, C. (2013) Introduction to Research Methods and Statistics in Psychology. Pearson Education Limited
5. Hayes, A. (2013) Introduction to Mediation, Moderation, and Conditional Process Analysis, A Regression-Based Approach. Guilford Press

Course Code	Name of the Course	Number of Credits	Total number of hours
PhDN202P/T	RAC Recommended Subject	4	60

Course Code	Name of the Course	Number of Credits	Total number of hours
PhDN203T	Research Communication And Publication Ethics	3	45

Course Outcomes:

At the end of the course, the student will be able to:

1. Select appropriate tools for clinical and experimental research in naturopathy.
2. Apply validated measurement techniques for assessing biological, physiological and psychological outcomes.
3. Design and pilot interventions for naturopathic therapies in research settings.
4. Document, analyze, and interpret research data using appropriate methods.

Unit 1- Publication Ethics **15 hours**

- Publication ethics: definition, introduction and importance
- Best practices I standards setting initiatives and guidelines: COPE, WAME, etc.
- Conflicts 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, complaints and appeals
- Predatory publishers and journals

Unit 2 -Practice **15 hours**

Open Access Publishing

- Open access publications and initiatives
- SHERP A/ROMEO online resource to check publisher copyright & self-archiving policies
- Software tool to identify predatory publications developed by SPPU
- Journal finder I journal suggestion tools viz. JANE, Elsevier Journal Finder, Springer Journal

Suggester, etc.

Publication Misconduct A. Group Discussions

- Subject specific ethical issues, FFP, authorship
- Conflicts of interest
- Complaints and appeals: examples and fraud from India and abroad

Unit 3- Software tools **10 hours**

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

Unit 4 - Research Metrics **5 hours**

- Indexing databases
- Citation databases: Web of Science, Scopus, etc.
- Impact Factor of journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score
- Metrics: h-index, g index, ilO index, altmetrics

References:

1. Bird, A. (2006). Philosophy of Science. Routledge.
2. Macintyre, A. (1967) A Short History of Ethics. London.
3. Chaddah, P. (2018) Ethics in Competitive Research: Do not get scooped; do not get plagiarized.
4. Resnik, D. B. (2011). On Being a Scientist: A Guide to Responsible Conduct in Research: Third Edition. What is ethics in research & why is it important. National Academies Press.