

MIT ADT University
Ph. D.
Semester I
(CBCS Pattern)

- **Course title** : **Research and Publication Ethics**
- **Course code** : **21PHDESFT 2**
- **Course credits** : **2(1+0+1)**
(L-1, T-0, P-1)
- **Contact hr.** : **1L: 0T: 2P**
- **Course category** : **Common for all disciplines**

Objectives

- To understand the basics of philosophy of science and ethics
- To make the students aware about research integrity and publication ethics
- To get the Hands-on-sessions which are designed to identify research misconduct and predatory publications
- To understand the indexing and citation databases
- To apply the knowledge for open access publications, research metrics (citations, h-index, Impact Factor, etc.) and plagiarism tools

Curriculum

Course as a source of generalized information:

This course is focusing on basics of philosophy of science and ethics, research integrity, publication ethics. Hands-on-sessions are designed 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 will be introduced in this course.

- **Module I : Philosophy and Ethics**

- **Introduction to philosophy: definition, nature and scope, concept, branches** (2 Lectures)

- **Ethics: definition, moral philosophy, nature of moral judgements and reactions** (2 Lectures)

- **Module II : Scientific Conduct**

- Ethics with respect to science and research, Intellectual honesty and research integrity (1 Lecture)
 - Scientific misconducts: Falsification, Fabrication, and Plagiarism (FFP) (1 Lecture)
 - Redundant publications: duplicate and overlapping publications, salami slicing (1 Lecture)
 - Selective reporting and misrepresentation of data (1 Lecture)
- **Module III : Publication Ethics**
- Publication ethics: definition, introduction and importance (1 Lecture)
 - Best practices / standards setting initiatives and guidelines: COPE, WAME, etc. (2 Lectures)
 - Conflicts of interest (1 Lecture)
 - Publication misconduct: definition, concept, problems that lead to unethical behaviour and vice versa, types (1 Lecture)
 - Violation of publication ethics, authorship and contributorship (1 Lecture)
 - Identification of publication misconduct, complaints and appeals (1 Lecture)
 - Predatory publishers and journals (1 Lecture)

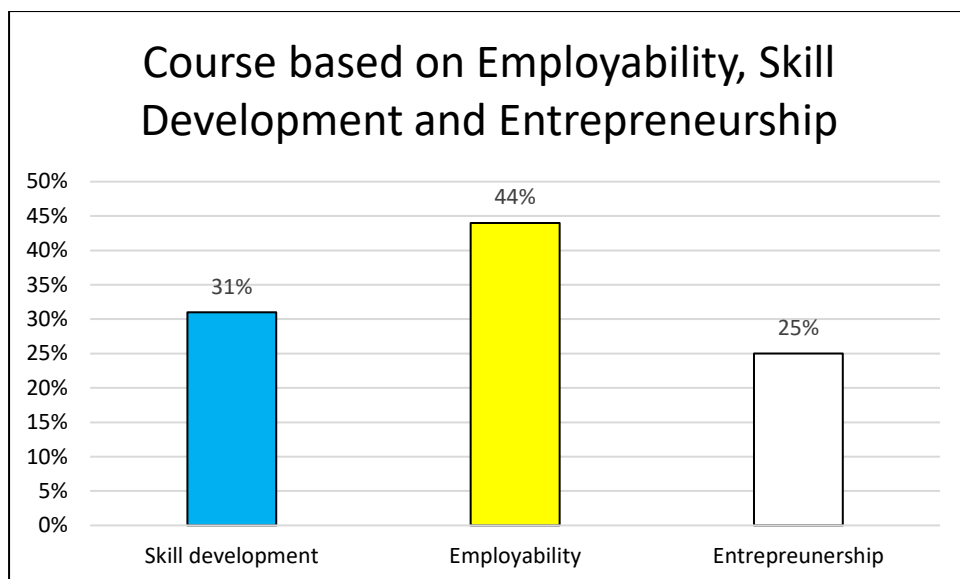
Additions –00% (Green Font): NA

Deletions – 00% (Red Font strikethrough) Justification: NA

Employability – 44 %

Skill Development – 31%

Entrepreneurship – 25%



Practical

Module base practical setup: 3 modules

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

Publication Misconduct -Group Discussion - Subject specific ethical issues, FFP, authorship, Conflicts of interest, Complaints and appeals: examples and fraud from India and abroad
Software tools- Use of plagiarism software like Turnitin, Urkund and other open source software tools

Databases and Research Metrics – Databases- Indexing databases, Citation databases: Web of Science, Scopus, etc.

Research Metrics- Impact Factor of journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score

No. of Units	Topics	No. of Experiments
1	Open Access Publishing <ol style="list-style-type: none"> 1. Open access publications and initiatives 2. SHERPA/RohvfEO 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. 	4
2	Publication Misconduct <ol style="list-style-type: none"> A) Group Discussion <ol style="list-style-type: none"> 1. Subject specific ethical issues, FFP, authorship 2. Conflicts of interest 	2

	3. Complaints and appeals: examples and fraud from India and abroad B) Software tools Use of plagiarism software like Turnitin, Urkund and other open-source software tools	
3	Databases and Research Metrics A) Databases 1. Indexing databases 2. Citation databases: Web of Science, Scopus, etc. B) Research Metrics 1. Impact Factor of Journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score	4 3
	Total	15

Teaching-Learning Activities

The course is based on ‘LTP’ pattern, where ‘L’ stands for Lecture, ‘T’ stands for Tutorial and ‘P’ stands for Practical. The course consists of 2 credits. 1credit is devoted to Lecture (L) and 1 credit is devoted to Practical (P).

Each lecture session (L) shall be of 1h duration. One such session of 1h duration, shall be conducted in a week. Each practical session (P) shall be of 2h duration and shall be conducted once in a week.

Teaching Methods Used

- Lecture 1
- Practical 1
- Tutorial 0
 - Experiential teaching
 - Demonstration
 - Seminar
 - Practical
 - Lecture

Teaching Aids Used

Board & Pen Method - 60%
 PPT presentation – 40%

Workload of a Student

The information below is provided as a guide to assist students in engaging appropriately with the course requirements.

A student enrolled in a 2 credits course, such as this, should expect to spend, on an average 45 hours formal contact time required to complete the course. This includes 15 hours (1h per week) formal contact time for lecture and 30 hours (2h per week) formal contact time for practical.

In addition to this student will have to spend additional non-contact time (2h per week) for reading and revision on holidays, without disturbing teaching-learning schedule in the class room/lab. Non-contact time includes 'completion of field work for home assignment', 'writing report for home assignment', completing the practical record books', 'reading' and 'revision'.

For this course there are 4 hours per week of contact time in class, therefore, students are expected to spend an additional 2 hours per week of non-contact time finishing workshops, revising and completing readings.

Specific Course Requirement

The course has assignment, library work, wherein student has to work independently. The surprise class test is a compulsory component of the course.

Evaluation & Assessment Methods Used

Formative Assessment:

- Continuous Evaluation (Mid Term Examination & Continuous Assessment)
- 40% weightage: 40 marks (Theory)
- Formative Assessment will be based on continuous comprehensive pattern
- For theory there shall be Mid-term examination of 20 marks and Continuous Evaluation of 20 marks. For Practical's journal/manual submission is assessed continuously by course teacher for 10 marks.

Summative Assessment:

- End Term Examination
- 60% weightage: 60 marks (Theory)
- There shall be an End-term examination of 100 marks, including 60 marks for theory and 40 marks for practical examination.

Formative Evaluation – The answer sheet of formative examination will be shown to individual students and the student will be guided how to improve upon the performance.

Summative Evaluation – The end term examination shall be conducted as per the university examination schedule. The papers, for both Theory & Practical shall be assessed by the teacher who teaches the course.

Reference Books

- ✓ Research and Publication Ethics by Santosh Kumar Yadav
 - ✓ Ethics in Research & Publication by Catriona Fennell (Elsevier publication)
 - ✓ Bird A. (2006). *Philosophy of science*. 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: 978-9387480865
 - ✓ 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 and 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.
https://www.insaindia.res.in/pdf/ethics_Books.pdf

Research Journals for further reading

Research Journals

- ✓ Research Ethics
- ✓ Research and Publishing Ethics
- ✓ Journal of Research and Publication Ethics (JRPE)
- ✓ International Journal of Advance Research, Ideas and Innovations in Technology

Technical Magazines

- ✓ Publication Ethics

Course Learning Outcome

Skills developed after completing the course

- The course will develop the research mindset in students in an analytical technique to achieve their research goal and train for analysing and interpreting results.
- Learn the basics of philosophy of science and ethics and aware about research integrity and publication ethics

- Hands-on-sessions which are designed to identify research misconduct and predatory publications.
- **Skills developed after completing the course**
 - 1) **CO1** - Understand the basics of philosophy of science and ethics
 - 2) **CO2** - Analyze critically and differentiate between scientific misconduct and conduct and take the corrective decision in the scientific research work.
 - 3) **CO3** - Understand the concept of research integrity and publication ethics and apply during the indexing and citation databases.
 - 4) **CO4** - Understand the indexing and citation databases and apply the knowledge for open access publications, research metrics (citations, h-index, Impact Factor, etc.) and plagiarism tools
- **The course will also help the student to develop**
 - Critical thinking
 - Capacity to work independently
 - Self confidence
- **Job Scope for these skills**
 - Public, private, partnership sectors
 - Research organizations
 - Academic sector
 - Students can also prepare for state FDA, FSSAI, FCI, BIS, Nutrition and dietetics post, MPSC and UPSC examinations
- **Scope for Further Studies**
 - Post Doctorate Program
- **Research institutes / centers working on Research and Publication Ethics**
 - Central Food Technological Research Institute (CFTRI), Mysore, India
 - Central Food Technological Research Institute (CSIR)
 - Indian Institute of Food Processing Technology (IIFPT)
 - National Institute of Food Technology Entrepreneurship and Management (NIFTEM)
 - Indian Institute of Crop Processing Technology (IICPT)

Major Societies on Research and Publication Ethics

- Committee on **Publication Ethics** (COPE)
- American Anthropological Association [AAA],
- American Association of University Professors [AAUP],

- American Chemical Society [ACS],
- American Federation for Clinical Research [AFCR],
- American Political Science Association [APSA],
- American Psychological Association [APA],
- American Sociological Association [ASA],
- Ecological Society of America [ESA],
- American Society for Microbiology
- Society of Neuroscience [SN])
- Society for Epidemiologic Research
- International Epidemiologic Association

Mapping of COs with PSOs

Outcomes	PSO1	PSO2	PSO3
CO1	1	2	3
CO2	1	2	3
CO3	1	2	3
CO4	1	2	3

- **Mapping Criteria:**
- **1 – High**
- **2 – Medium**
- **3 – Low**

Mapping of COs with POs

Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	2	3	3	1	2	3	1	3	3	3	2
CO2	1	2	3	3	1	2	3	1	3	3	3	2
CO3	1	2	3	3	1	2	3	1	3	3	3	2
CO4	1	2	3	3	1	2	3	1	3	3	3	2

- **Mapping Criteria:**
- **1 – High**
- **2 – Medium**

- 3 – Low

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Note: According to the UGC guidelines this course with course content was introduced from this academic year 2020-2021