



University of Kerala

Discipline	PHYSICS				
Course Code	UK4VACPHY201				
Course Title	RESEARCH AND PUBLICATION ETHICS				
Type of Course	VAC				
Semester	IV				
Academic Level	200 - 299				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours/Week
	3	3 Hrs	-	-	3 Hrs
Pre-requisites					
Course Summary	The objective of this course is to instruct the students interested and expecting to do research, about the philosophy of research; research and publication ethics; accessibility of .publications and the publication misconduct				

BOOKS FOR STUDY:

1. Indian National Science Academy. 2019. Ethics in Science Education, Research and Governance. Edited by K Muralidhar Amit Ghosh AK Singhvi ISBN: 978-81-939482-1-7
2. Research and Publication Ethics, Dr. Upendra Pratap, Ms. Sakshi Ahlawat, Dr. Sushma Sharma
SULTAN CHAND & SONS

BOOKS FOR REFERENCE:

1. Alexander Bird,. (2006). Philosophy of Science. Routledge. ISBN 9781857285048
2. Chaddah, P. (2018) Ethics in Competitive Research: Do not get scooped; do not get plagiarized. ISBN 9387480860
3. Israel, M. (2015). Research Ethics and Integrity for Social Scientists: Beyond Regulatory Compliance. (Second ed.) SAGE Publications Ltd.
4. RESEARCH & PUBLICATION ETHICS, Dr.S.B.Kishor , Dr.Ajay S.Kushwaha , Dr.Gitanjali J ,DAS GANU Prakashan.

DETAILED SYLLABUS: THEORY

Module	Unit	Content	Hrs	CO No
I	Introduction		9	
	1	Introduction to philosophy: definition, nature and scope, concept, branches	4	1
	2	Ethics: definition, moral philosophy, nature of moral judgements and reactions	5	1
II	Scientific Conduct		9	
	3	Ethics with respect to science and research, Ethics in Measurement Practices, Ethical Practices in Science Outreach, Ethical Issues Associated with Gender-Bias : Chapter Chapter 6,7,8 of Book2	3	1
	4	Intellectual honesty and research integrity, Chapter 3 of Book 6	2	1
	5	Scientific Misconducts: Falsification, Fabrication, and Plagiarism (FFP) Chapter 10 of Book 6	2	2
	6	Redundant publications: duplicate and overlapping publication, salami slicing, Selective reporting and misrepresentation of data Chapter 4 of Book 6	2	2
	Publication Ethics: (chapter 4 and 5 of Book 3, Chapter 5,6 and 8 of Book 6)		9	
III	7	Publication Ethics: definition, introduction and importance. Best practices – standards setting initiatives and guidelines: COPE & WAME	3	3`
	8	Conflict of interest d. Publication misconduct: definition, concept, problems that lead to unethical behavior and vice-versa, types	2	2
	9	Violation of publication ethics, authorship and contributorship ,	2	3
	10	Identification of publication misconduct, complaints and appeals ,Predatory publishers and journal	2	2

IV	Databases and Research Metrics (Book 6 : Chapter 11 & 12)		9	
	11	Databases a. Indexing databases b. Citation databases: Web of Science, Scopus, etc.	4	4
	12	Research Metrics a. Impact factor of journal as per journal citation report, SNIP, SJR, IPP, Cite Score b. Metrics: h-index, g index, i10 index, altmetrics	5	4
V*	Online Publishing (Book 6 : Chapter 7 ,9 and 10)		9	
	13	Open Access publications and Initiatives	2	5
	14	online resource to check publisher copyright and self- achieving policies	2	5
	15	Software tool to identify predatory publications developed by SPPU	2	5
	16	Journal Finder/ Journal Suggestion tools viz. JANE, ELSEVIER, SPINGER, Journal suggester etc.	2	5
	17	Use of plagiarism software Urkund and other open source software tools	1	5

COURSE OUTCOMES

No.	Upon completion of the course the graduate will be able to	Cognitive Level	PSO addressed
CO-1	Students will understand the basics of philosophy of science and ethics, research integrity, publication ethics.	U	PSO-4,7
CO-2	Students will be able to identify research misconduct and predatory publications	R, U	PSO-4,7
CO-3	Students will get a good insight of best practises in publications ,violations , author contributions	R,U	PSO-7
CO-4	Students will get an in- depth knowledge on Indexing and citation databases. Students will be able to calculate publications research metrics(citations, h-index, Impact Factor, etc.) and plagiarism tools	Ap	PSO-7

CO-5	Students will be able to use Software tool to identify predatory publications, Journal Finder/ Journal Suggestion tools, plagiarism softwares and other open source software tools	U,AP	PSO-7
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R-Remember, U-Understand, Ap-Apply, An-Analyse, E-Evaluate, C-Create

Name of the Course: RESEARCH AND PUBLICATION ETHICS

Credits: 3:0:0 (Lecture: Tutorial: Practical)

CO No.	CO	PO / PSO	Cognitive Level	Knowledge Category	Lecture (L)/ Tutorial (T)	Practical (P)
CO-1	Students will understand the basics of philosophy of science and ethics, research integrity, publication ethics.	PO1,2,4,5,6,8/ PSO-4,7	U	F, C	L	-
CO-2	Students will be able to identify research misconduct and predatory publications	PO1,2,4,5,6,8/ PSO-4,7	R, U	F, C	L	-
CO-3	Students will get a good insight of best practises in publications ,violations , author contributions	PO1,2,4,5,8/ PSO-4	R,U	F, C	L	-
CO-4	Students will get an in-depth knowledge on Indexing and citation databases. Students will be able to calculate publications research	PO1,2,4,5,8/ PSO-4	Ap	F, C, P	L	-

	metrics(citations, h-index, Impact Factor, etc.) and plagiarism tools					
CO-5	Students will be able to use Software tool to identify predatory publications, Journal Finder/ Journal Suggestion tools, plagiarism softwares and other open source software tools	PO1,2,4,5,8/ PSO-4	U,AP	P	L/T	-

F-Factual, C- Conceptual, P-Procedural, M-Metacognitive

Mapping of COs with PSOs and POs :

	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8
CO-1	-	-	-	1	-	-	2	2	2	-	2	2	2	-	2
CO-2	-	-	-	1	-	-	2	1	2	-	1	1	2	-	3
CO-3	-	-	-	2	-	-	-	2	2	-	3	3	-	-	2
CO-4	-	-	-	2	-	-	-	2	2	-	2	2	-	-	2
CO-5	-	-	-	2	-	-	-	2	2	-	3	2	-	-	2

Correlation Levels:

Level	-	1	2	3
Correlation	Nil	Slightly / Low	Moderate / Medium	Substantial / High

Assessment Rubrics:

- Quiz / Assignment/ Discussion / Seminar
- Midterm Exam
- Programming Assignments
- Final Exam

Mapping of COs to Assessment Rubrics:

CO No	Internal Exam	Assignment	Project Evaluation	End Semester Examinations
CO-1	✓	-	-	✓
CO-2	✓	-	-	✓
CO-3	✓	-	-	✓
CO-4	✓	✓	✓	✓
CO-5	✓	✓	-	-