

Ph.D Course Work Syllabus-2024

**PROGRAM OUTCOMES (POs) – Ph.D.**

PO1 Prepare and motivate the students to advance their research careers beyond a doctoral degree, pursue careers in academics and industries.

PO2 Make the students understand that acquiring knowledge and skills appropriate to their professional activities is a never-ending process.

PO3 Train-up the students in such a way that they can objectively carry out investigations, scientific and/or otherwise, without being biased or without having any preconceived notions.

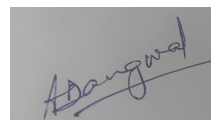
PO4 Inspire them in such a way that they can demonstrate and maintain the highest standard on ethical issues in their professional lives.

PO5 Create awareness among the students to be persons of integrity, to be responsible and enlightened citizens with a commitment to deliver good to the society within the scope of the bestowed rights and privileges.

PO6 Discover, interpret and communicate new knowledge through original research of publishable quality which satisfies peer review

PO7 demonstrate a thorough knowledge of the literature and a comprehensive understanding of methods and techniques applicable to their own research

PO8 work collaboratively with all stakeholders to create, develop and exchange research knowledge to influence and benefit society and the economy



## PMB-C111: RESEARCH METHODOLOGY

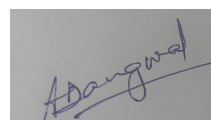
**Duration of Main Exam: 3 Hrs.**  
**External – 100**

**Note:** Ten questions are to be set taking two questions from each unit. The student has to attempt FIVE questions taking one question from each unit. The previous year paper/model may be used as a guideline and the following syllabus should be strictly followed while setting the question paper.

	<b>Course Outcomes:</b>	<b>Mapped Program Outcomes</b>
<b>CO.1</b>	To develop understanding on various kinds of research, research process and research designs.	<b>PO.1, PO.2, PO.3.</b>
<b>CO.2</b>	To understand the theories and assertions of sampling methods.	<b>PO.1, PO.2, PO.3</b>
<b>CO.3</b>	To apply the concepts of various qualitative and quantitative research techniques.	<b>PO.1, PO.2, PO.3, PO.7, PO.8</b>
<b>CO.4</b>	To formulate tools for data collection, data analysis and interpretation of results.	<b>PO.4, PO.5, PO.6, PO.7, PO.8</b>
<b>CO.5</b>	To validate the various univariate, bivariate and multivariate techniques through mathematical understanding.	<b>PO.4, PO.5, PO.6, PO.7, PO.8</b>

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	2	2	1	1	1	1	1
CO2	2	2	2	1	1	1	1	1
CO3	2	2	2	1	1	1	2	2
CO4	1	1	1	2	2	2	2	2
CO5	1	1	1	2	2	2	2	2
CO6	-	-	-	-	-	-	-	-
Average	1.6	1.6	1.6	1.4	1.4	1.4	1.6	1.6

- **Business Research strategies and design :** Theory and research, Epistemological considerations, Ontological considerations, Relationship of epistemology and ontology to business research, Research strategy: quantitative and qualitative, Criteria in business research, Research designs, Cross-sectional design, Comparative design, Reviewing the existing literature and engaging with what other have written, Searching the existing literature and looking for business information, Referencing your work, Avoiding plagiarism. **Case Study 1,"** Bharat Petroleum Company Limited's (BPCL), India one-stop truck shop (OSTS) retailing format." (9 hours)
- **Sampling & Sampling techniques:** Sampling error, Types of probability sample, Sample size, Types of non-probability sampling, the structured interview, Interview contexts, conducting interviews, other approaches to structured interviewing, Concepts and their measurement. (8 hours)
- **Instrument Design and Testing:** Designing the self-completion questionnaire, Diaries as a form of self-completion questionnaire, Open or closed questions, Types of question, Rules for designing questions, Vignette questions, Piloting and pre-testing questions, Problems with survey research on behavior, the observation schedule, Strategies for observing behavior, Sampling, *Issues of reliability and validity*, Coding, Advantages and Disadvantage of content analysis. **Case Study 2** Olimpia C. Racela Amonrat Thoumrungroje, (2012), "International market expansion of "Jintan Nude" in Thailand." (8 hours)
- **Quantitative Research Methods:** Concepts in qualitative research, Reliability and validity in qualitative research, the critique of qualitative research. General strategies of qualitative data analysis. (8 hours)
- **Internet Research Methods:** World Wide Web sites of pages as objects of analysis, using websites to collect data

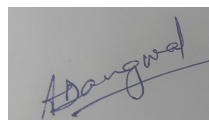
from individuals, Virtual ethnography, Qualitative research using online focus groups, qualitative research using online personal interviews, online social surveys.

(7 hours)

**SUGGESTED READINGS:**

- Arya,P.P.and Pal,Yesh(2011).*Research Methodology in Management, Theory & Cases Studies*, Deep &Deep Publication Pvt. Ltd., New Delhi.
- Bryan and Bell (2008).*Business Research Methods.*, Oxford Press., New Delhi.
- Chawla, Deepak and Sodhi, Neena (2012).*Research Methodology concept and case.*,Vikash Publication House.New Delhi.
- Donald,H. Mc Burney and White,L. Therasa (2009).*Research Methodology*, Cengage Learning, New Delhi.
- Donald R.Cooper and Schindler,Pamela (2008).*Business Research Methods*,Tata McGraw Hills.
- Karlinger(2004).*Foundations of Behaviour Research*,Surjeet and Company,New Delhi.
- Kothari C.R.(2001). *Research Methodology :Methods and Techniques*,Vishwa Prakashan,New Delhi.
- Madan, P.(2010). *Research Methodology*,Global Vision Publishing House,New Delhi.
- Tripathi, P.C.(2005).*Research Methodology*,Sultan Chand &Co.,New Delhi.
- Wilkinson and Bhandarkar (2003).*Methodology & Techniques of Social Research*,Himalaya Publishing House, Bombay.
- Zikmund,W.G.(2003).*Business Research Methods*,Cengage Learning,New Delhi.
- **CASE STUDY 1:** Denver D'Rozario Keshav Shenoy, (2011)," Bharat Petroleum Company Limited's (BPCL), India one-stop truck shop (OSTS) retailing format ", Emerald Emerging Markets Case Studies, Vol. 1 Iss 3 pp. 1 – 25 Permanent link to this document: <http://dx.doi.org/10.1108/20450621111180936>
- **CASE STUDY 2:** Olimpia C. Racela AmonratThoumrungroje, (2012),"International market expansion of “Jintan Nude” in Thailand", Emerald Emerging Markets Case Studies, Vol. 2 Iss 4 pp. 1 – 17Permanent link to this document: <http://dx.doi.org/10.1108/20450621211256265>

**NOTE:** The list of cases, specific references and books including recent articles will be announced in the class by concerned teacherfromtime to time.



## PMB-C112:RESEARCH AND PUBLICATION ETHICS

*Duration of Main Exam: 3 Hrs.*

*External – 100*

*Note: Ten questions are to be set taking two questions from each unit. The student has to attempt FIVE questions taking one question from each unit. The previous year paper/model may be used as a guideline and the following syllabus should be strictly followed while setting the question paper.*

	<b>Course Outcomes:</b>	<b>Mapped Program Outcomes</b>
<b>CO.1</b>	To understand the philosophy of science and ethics, research integrity and publication ethics. To identify research misconduct and predatory publications.	<b>PO.1, PO4, PO8</b>
<b>CO.2</b>	To understand indexing and citation databases, open access publications, research metrics (citations, h-index, impact Factor, etc.). To understand the usage of plagiarism tools.	<b>PO.1, PO.2, PO.3</b>

## Course Code and Name:

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	1	1	2	1	1	1	2
CO2	2	2	2	1	1	1	1	1
CO3								
CO4								
CO5								
CO6								
Average	2	1.5	1.5	1.5	1	1	1	1.5

- RPE 01: PHILOSOPHY AND ETHICS (3 hours)**  
 Introduction to philosophy: definition, nature and scope, concept, branches.  
 Ethics: Definition, moral philosophy, nature of moral judgements and reactions.
- RPE 02: SCIENTIFIC CONDUCT (5 hours)**  
 Ethics with respect to science and research  
 Intellectual honesty and research integrity  
 Scientific misconducts: Falsification, Fabrication, and Plagiarism (FFP)  
 Redundant publications: Duplicate and overlapping publications, salami slicing. Selective reporting and misrepresentation of data
- RPE03: PUBLICATION ETHICS (7 hours)**  
 Publication ethics: definition, introduction and importance  
 Best practices/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
- RPE 04: OPEN ACCESS PUBLISHING (4 hours)**  
 Open access publications and initiatives  
 SHERPA/RoMEO 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
- RPE05: PUBLICATION MISCONDUCT (4 hours)**  
 A. Group Discussions (2 hrs.)  
 Subject specific ethical issues, FFP, authorship Conflicts of interest  
 Complaints and appeals: examples and fraud from India and abroad

B. Software tools (2hrs.)

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

● **RPE06: DATABASES AND RESEARCH METRICS (7 hours)**

A. Databases

(4 hrs.)

Indexing  
databases

Citation data bases: Web of Science, Scopus, etc.

B. Research Metrics (3hrs.)

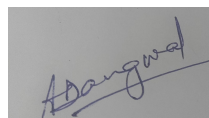
Impact Factor of journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score.

Metrics: h- index, g index, i10 index, altimetric

**SUGGESTED READINGS:**

- Brid, 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 cooped; 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 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](http://www.insaindia.res.in/pdf/Ethics%20Book.pdf)

**NOTE:** The list of cases, specific references and books including recent articles will be announced in the class by concerned teacher from time to time.



## PMB-C113:QUANTITATIVE TECHNIQUES

*Duration of Main Exam:3 Hrs.*

*Marks: External–100*

*Note: Ten questions are to be set taking two questions from each unit. The student has to attempt FIVE questions taking one question from each unit. The previous year paper/model may be used as a guideline and the following syllabus should be strictly followed while setting the question paper.*

	Course Outcomes:	Mapped Program Outcomes
CO.1	To understand the basics of decision theory concepts and its application in Business problems.	PO.1, PO.2
CO.2	To apply the concepts of hypothesis testing to complex business research problems.	PO.1, PO.2, PO.5,PO.6,PO.7, PO.8
CO.3	To formulate the equations using regression, correlation and simplex methods.	PO.6, PO.7, PO.8
CO.4	To employ probability methods in likelihood estimation problems.	PO.1, PO.2, PO.5,PO.6,PO.7
CO.5	To elucidate the data through various forecasting methods	PO.4,PO.5, PO.6,PO.7,PO.8

## Course Code and Name:

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	2	1	1	1	1	1	1
CO2	2	2	1	1	2	2	2	2
CO3	1	1	1	1	1	2	2	2
CO4	2	2	1	1	2	2	2	1
CO5	1	1	1	2	2	2	2	2
CO6								
Average	1.6	1.6	1	1.2	1.6	1.8	1.8	1.6

- Classification & Presentation of Data: Tabulation-Types of Tables, Diagrammatical and Graphical presentation. **Case Study 1** "Ommune IT Solutions: make or break",
- Mathematical basis of Managerial Decision-Concepts, Frequency Distribution and their Analysis.
- Correlation and Regression Analysis, Test of Hypothesis—t, Z and chisquare tests, Analysis of Variance, Time Series Analysis and Forecasting.
- Factor analysis, Discriminant analysis, Cluster analysis and Multivariate analysis. **Case Study 2**, "Icando better: Mexican direct sellers of beauty products "
- Use of Mathematical Modeling in Management Decision Making, Use of Statistical packages like SPSS, SYSTAT and Capital line database.

## SUGGESTED READINGS:

- Burton, V Sasiemi (1978). *Mathematics for Modern Management*, Wiley Eastern, New Delhi.
- Chadha, N.K. (1996). *Statistics for Behavioral and Social Sciences*, Reliance Publishing House, New Delhi.
- Gupta, S. Pand Gupta, M.P. (2009). *Business Statistics*, Sultan Chand, New Delhi
- Kazmiot, L. Jand Phol, N.F. (1988). *Basic Statistics for Business & Economics*, McGraw Hill, New York.

- Levin, Richard I and Rubin, David (2007). *Statistics for Management*, Prentice Hall of India, New Delhi.
- Levine, David M, Krehbiel, Timothy C, Berenson, Mark L., and Viswanathan, P.K. (2011). *Business Statistics*, Prentice Hall of India, New Delhi.
- Narag, A.S. (1996). *Linear Programming and Decision-Making*, Sultan Chand & Sons, New Delhi.
- Sharma, J.K. (2001). *Fundamentals of Operations Research*, Mac Milan, New Delhi.
- Sineich, Terry and Collier (1990) *Business Statistics by Examples*, Mac Milan Publishers, London.
- Stephen, K.C. (2002). *Applied Business Statistics-Text Problems & Cases*, Harper and Row, New Delhi.
- **CASE STUDY 1:** Monica Singhanian Syed Ashraf Husain, (2012), "Immune IT Solutions: make or break", Emerald Emerging Markets Case Studies, Vol. 2 Iss 8 pp. 1 – 9 Permanent link to this document: <http://dx.doi.org/10.1108/20450621211311597>
- **CASE STUDY 2:** Lucía Fernández Reyes Dr Raja gopal, (2013), "Ic and obetter: Mexican direct sellers of beauty products ", Emerald Emerging Markets Case Studies, Vol. 3 Iss 5 pp. 1 –6 Permanent link to this document: <http://dx.doi.org/10.1108/EEMCS-10-2013-0197>

**NOTE:** The list of cases, specific references and books including recent articles will be announced in the class by concerned teacher from time to time.

**PMB-C114: LITERATURE SURVEY, REVIEW OF RESEARCH PAPER & PRESENTATION**

*Marks: External–100*

