

# **Learning Outcomes of Pre-Ph.D. Course Work in Commerce**

**Under**

***Tripura University Rules & Regulations for  
Doctor of Philosophy (Ph.D.)-2025  
based on  
UGC-Ph.D. Regulations- 2022***



***Department of Commerce,  
Faculty of Commerce, Law, Management and Information Science  
Tripura University  
(A Central University)  
2025***

# **Learning Outcomes of Pre-Ph.D. Course Work in Commerce**

## **Syllabus of Coursework for Ph.D. in Commerce Session: 2024-25 onward**

### **Preamble**

The Department of Commerce was established in the year 1988 under the Faculty of Arts & Commerce with a vision of providing excellence in the fields of Commerce by imparting value based education, training and research. Since its inception, the primary aim of the Department has been to make the student diagnose and respond to change in social realities through the development and application of knowledge. The aim of the department is to focus on a skill based outreach programme that would help the student to serve the society efficiently across the wide range of emerging humanitarian challenges in the globalized era. The department is making its utmost effort to make the Department the world class best place for Commerce education taking different layers of academics, research, outreach and extension activities.

Beginning with the 190-91 academic year, the department started the Doctor of Philosophy (Ph.D.) in Commerce program. It is mandatory for scholars enrolled in the department's Ph.D. program to finish the curriculum, which consists of 14 credit courses spread across one academic semester. The department wants its Ph.D. students to be able to establish themselves in the academic community and contribute in a significant and qualitative way to the body of knowledge already in existence.

### **Introduction**

The conduct of research is one of the fundamental components that must be present in any higher education institution in order to achieve success in the field of education and training. When it comes to enhancing information and making learning easier, research is the most effective tool. Academic research carried out by students is not only valuable to the students themselves, but it is also beneficial to the community as a whole. The department has begun offering a Doctor of Philosophy (Ph.D.) in Commerce program beginning with the academic session 1990-91. This decision was made in recognition of the significance of research for aspiring scholars, the academic community, and society in general. Individuals who have completed a master's degree program in commerce, management, economics, or certain professional courses are qualified to submit an application for the program offered by the department. It is mandatory for students who wish to enroll in the Ph.D. program offered by the department to finish all of the required

coursework. In order to fulfill the requirements of the program, students are required to finish 14 (fourteen) credit courses over the duration of one academic semester. During the course of the Ph.D. program, the department invites researchers to participate in a variety of national and international conferences and present their research papers at those conferences. In addition to this, the department mentors and encourages academics to submit high-quality research papers in reputable publications that are subject to peer review. The objective of the department is to instill the characteristics of a competent researcher in each and every scholar who joins the department. This is done with the expectation that, once they have completed the course, they will be able to flourish in their respective fields of specialization and become capable of doing independent research.

### **Qualification descriptors for the graduates**

Strong discipline knowledge, research abilities, communication skills, and critical thinking are crucial for PhD candidates. A PhD candidate must also exhibit tenacity, persistence, and the capacity to work both alone and cooperatively. Problem-solving skills, analytical reasoning, and a passion of study are further qualities expected from the researchers.

### **Program Specific Outcome (PO):**

**PSO1:** Equip students with advanced research techniques, methodologies, and practices.

**PSO2:** Develop analytical skills to critically evaluate existing literature and data.

**PSO3:** Provide tools for formulating research questions, hypotheses, and designing research studies.

**PSO4:** Enhance the ability to conduct independent research that contributes to knowledge in the respective field.

### **Course Structure:**

<b>Sl. No.</b>	<b>Course Name</b>	<b>Course Code</b>	<b>Credit</b>	<b>Nature</b>
<b>Paper-I</b>	Research Methodology I	PRM1-3011	4	Core
<b>Paper-II</b>	Research and Publication Ethics	PRPE-3012	2	Core
<b>Paper-III (Any One)</b>	Quantitative Methods in Business Research	PCOM-3013	4	Elective
	MOOC			
<b>Paper-IV</b>	Term Paper/ Dissertation	PCOM-3014	4	Core

Course Name	Course Code	Lecture (L)	Tutorial (T)	Practical (P)	Contact Hours (CH)	Credit
Research Methodology I	PRM1-3011	3	1	0	0	4
Research and Publication Ethics	PRPE-3012	2	0	0	0	2
Quantitative Methods in Business Research	PCOM-3013	0	0	4	1	4
Term Paper/ Dissertation	PCOM-3014	0	0	1	3	4

### Course Specific Outcomes (COs)

Course Specific Outcomes (COs)		
Course Code	Course Title	Course Specific Outcomes (COs)
PRM1-3011	Research Methodology I	<p>At the end of the course research scholar will be able to</p> <p><b>CO1:</b> Understand the foundational concepts and principles of research</p> <p><b>CO2:</b> Identify the appropriate research methodology for different types of research problems.</p> <p><b>CO3:</b> Formulate clear research questions, objectives, and hypotheses.</p> <p><b>CO4:</b> Communicate research findings effectively through reports, papers, and presentations.</p>
PRPE-3012	Research and Publication Ethics	<p>At the end of the course research scholar will be able to</p> <p><b>CO1:</b> understand rules, issues, options, and resources for research ethics.</p> <p><b>CO2:</b> familiarize with various institutional ethics review boards/academic integrity guidelines.</p> <p><b>CO3:</b> acquire knowledge on basics of philosophy of science and ethics, research integrity and publication ethics.</p> <p><b>CO4:</b> familiar with publication misconducts, databases and research metrics.</p>

PCOM-3013	Quantitative Methods in Business Research	<b>CO1:</b> learn how to handle databases like CMIE Prowess IQ, EPWRF time series etc.; <b>CO2:</b> bridge the gap between theory and practical applications. <b>CO3:</b> provide students with the knowledge to use open-source software like R and spreadsheet to solve the basic statistical problems. <b>CO4:</b> build an intuitive understanding of the most modern tools and techniques of business data analysis.
PCOM-3013	Term Paper/ Dissertation	<b>CO1:</b> submit an Annotated Bibliography based on online Scopus/ Web of Science databases. <b>CO2:</b> choose the appropriate methodology required based on hit gap method for their proposed research topic <b>CO3:</b> enable the students to write systematic review of literature on a particular topic worthy of publication in a referred journal. <b>CO4:</b> preparing a plan of work on proposed research topic.

### Mapping of course with program outcomes (POs)

Course mapping					
Course Name	Course Code	PO1	PO2	PO3	PO4
Research Methodology I	PRM1-3011	☑	☑	☑	☑
Research and Publication Ethics	PRPE-3012	☒	☑	☒	☒
Quantitative Methods in Business Research	PCOM-3013	☑	☒	☑	☑
Term Paper/ Dissertation	PCOM-3014	☑	☑	☑	☑

### Evaluation plan:

Three criteria are used to evaluate scholars: (i) theoretical understanding and awareness of current advancements in the field of business research; (ii) writing proficiency; and (iii) communication proficiency. Tests of descriptive analysis are used to assess the current and theoretical understanding of business research. The capacity to write term paper is used to assess writing skills, while performance in various departmental presentations and viva-voce is used to assess communication skills.

## DETAILED SYLLABUS

### Research Methodology-I (L-3, T-1, P-0, CH-0)

**Course Code:** PRM1-3011

**Course Title:** Research Methodology-I

**Credits:** 4

**Duration:** 1 Semester

**Total Marks:** 100

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#### Course Specific Outcomes (CO):

Upon successful completion of the course, the students will be able to:

1. Understand the foundational concepts and principles of research.
  2. Identify the appropriate research methodology for different types of research problems.
  3. Formulate clear research questions, objectives, and hypotheses.
  4. Communicate research findings effectively through reports, papers, and presentations.
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#### Course Structure

##### Unit I: Introduction to Research and Research Process

- **Concept of Research:** Definition, types of research, significance in academia and industry.
  - **Research Process:** Steps in the research process, formulation of research questions and hypotheses.
  - **Research Design:** Concept, importance, and types (descriptive, exploratory, experimental, etc.).
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##### Unit II: Research Methods and Methodology

- **Qualitative and Quantitative Research:** Definitions, methods, and approaches.
  - **Sampling Techniques:** Types of sampling methods – probability vs. non-probability sampling.
  - **Data Collection Methods:** Surveys, interviews, questionnaires, case studies, focus groups, observation, Laboratory, ethnographic, etc.
  - **Data Analysis and Interpretation:** Overview of statistical tools and methods.
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##### Unit III: Literature Review and Research Question Formulation

- **Literature Review:** Purpose, techniques for conducting a literature review, evaluating sources.
- **Developing a Research Question:** From literature, identifying gaps, formulating clear, researchable questions.
- **Theoretical Framework:** Understanding and formulating theoretical perspectives and models.

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## Unit IV: Writing and Presentation of Research

- **Research Paper Writing:** Structure, components (Abstract, Introduction, Literature Review, Methodology, Results, Discussion).
- **Citations and References:** Importance of proper citation styles (APA, MLA, Chicago).
- **Thesis Writing:** Organizing and presenting a doctoral thesis.
- **Oral Presentation Skills:** Preparing for research defense, presenting research results effectively.

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## Unit V: Future Trends

- **Emerging Research Tools:** Artificial Intelligence generative tools, Digital resources
- **Role of Inter-disciplinary/ Multidisciplinary/ Trans-disciplinary research.**

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### Suggested Readings:

American Psychological Association. *Publication Manual of the American Psychological Association*.

Anderson, Marilyn. *Critical Thinking, Academic Writing and Presentation Skills*. Pearson

Bell, J. (2010). *Doing Your Research Project*.

Berg, Bruce L. *Qualitative Research Methods for the Social Sciences*.

Bernard, H.R. (2017). *Research Methods in Anthropology: Qualitative and Quantitative Approaches*.

Booth, W.C., Colomb, G.G., & Williams, J.M. (2008). *The Craft of Research*.

Braun, V., & Clarke, V. (2006). *Using Thematic Analysis in Psychology*.

Bryman, A. (2016). *Social Research Methods*. New York: OUP.

Burns, R.B. (2000). *Introduction to Research Methods*.

Cooper, H., & Hedges, L. V. (Eds.). (2009). *Handbook of Research Synthesis and Meta-Analysis*.

Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*.

Creswell, J.W., & Poth, C.N. (2018). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*.

Daniel, Sandra. *Impactful Academic Writings*. Xlibris

Davis, Gordon B. *Writing the Doctoral Dissertation: A Systematic Approach*.

Denscombe, M. (2014). *The Good Research Guide: For Small-Scale Social Research Projects*.

Field, A. (2017). *Discovering Statistics Using IBM SPSS Statistics*.

Flick, U. (2018). *An Introduction to Qualitative Research*.

Gerring, J. (2012). *Social Science Methodology: A Unified Framework*.

Gibaldi, Joseph. *MLA handbook for writers of research papers*.

Gravetter, F.J., & Wallnau, L.B. (2017). *Essentials of Statistics for the Behavioral Sciences*.

Gupta, S. C. *Fundamental of Statics*, Himalaya Publishing.

Gupta, S. P. *Statistical Methods*. Sultan Chand & Sons.

Gustavil, Bjorn. *How to Write and Illustrate a Scientific Paper*.

Jupp, V. (2006). *The Sage Dictionary of Social Research Methods*.

Kothari, C. R. (2004). *Research Methodology: Methods and Techniques*. New Delhi: New Age International,

Kumar, R. (2011). *Research Methodology: A Step-by-Step Guide for Beginners*.

Machi, Lawrence & McEvoy, Deborah A. *The Literature Review: Six Steps to Success*.

Marcoulides, G. A. (Ed.) *Modern methods for Business Research*. Psychology Press.

Perelman, Leslie C. *Mayfield Handbook of Technical and Scientific Writings*.

McKinney, K., & Hargrove, T. (2018). *The Interdisciplinary Handbook of Research Design*.

Melville, Stuart & Wayne, Goddard. *Research methodology: an introduction for science & engineering students*.

Neuman, W.L. (2014). *Social Research Methods: Qualitative and Quantitative Approaches*.

Pallant, J. (2013). *SPSS Survival Manual*.

Patton, M.Q. (2002). *Qualitative Research & Evaluation Methods*.

Ranjit Kumar. *Research Methodology: A Step-by-Step Guide for Beginners*.

Saunders, Mark, et al. *Research Methods for Business Students*.

Schutt, R.K. (2019). *Investigating the Social World: The Process and Practice of Research*.

Sekaran, U., & Bougie, R. (2016). *Research Methods for Business: A Skill-Building Approach*.

Silverman, D. (2016). *Qualitative Research*.

Silvia, Paul J. *How to Write a Lot: A Practical Guide to Productive Academic Writing*.

Strunk, William Jr. & White, E.B. *The Elements of Style*.

Tabachnick, B.G., & Fidell, L.S. (2013). *Using Multivariate Statistics*.

Turabian, K.L. (2018). *A Manual for Writers of Research Papers, Theses, and Dissertations*. University of Chicago Press. *The Chicago Manual of Style*.

Walliman, N. (2017). *Your Research Project: Designing and Planning Your Work*.

Wayne, Goddard & Melville, Stuart. *Research Methodology: An introduction*

Zikmund, W. G. Babin, Carr, J.C. & Gri, M. *Business Research methods*. Mason: Cengage Learning.

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### **Suggested Tools/Software:**

- SPSS, R, Excel, LaTeX for data analysis and documentation.
- Zotero, Mendeley, RefWorks, EndNote for reference management.



## **Research and Publication Ethics** **(L-2, T-0, P-0, CH-0)**

**Course Code:** RPE-3012

**Course Title:** Research and Publication Ethics

**Credits:** 2

**Duration:** 1 Semester

**Total Marks:** 50

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### **Course Specific Outcomes (CO):**

Upon successful completion of the course, the students will be able to:

1. understand rules, issues, options, and resources for research ethics;
  2. familiarize with various institutional ethics review boards/academic integrity guidelines;
  3. acquire knowledge on basics of philosophy of science and ethics, research;
  4. familiar with publication misconducts, databases and research metrics.
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### **Course Structure**

**(a) Philosophy and Ethics:**

Introduction to philosophy: definition, nature and scope, concept, branches;

Ethics: definition, moral philosophy, nature of moral judgments and reactions

**(b) Scientific Conduct:**

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, salamislicing; Selective reporting and misrepresentation of data, falsification of images

**(c) Publication Ethics:**

Definition, introduction and importance of publication ethics; Best practices/standards setting initiatives and guidelines: COPE, WAME, etc.; Publication misconduct: Unethical behavior and vice versa; Violation of publication ethics, authorship and contributorship; Identification of publication misconduct, complaints and appeals; Predatory publishers and journals

**(d) Open Access Publishing:**

Open access publications and initiatives; SHERPA/ RoMEO online resource to check publisher copyright and 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)

**(e) Publication Misconduct:**

Group discussions on - (i) Subject specific ethical issues, FFP, authorship; (ii) Conflicts of interest; (iii) Complaints and appeals: examples and fraud from India and abroad; Using Software tools- (iv) Anti-plagiarism tools like Turnitin, Urkund,

DrillBit and i-Thenticate and other open sources software tools

**(f) Databases and Research Metrics:**

- (i) Databases –Indexing databases, Citation databases: Web of Science, Scopus etc.;
- (ii) Research Metrics-Impact factor of journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score, h-index, g index, i10 index, alt metrics;
- (iii) Citation of bibliography using Mendeley

**Suggested Readings:**

1. A. Bird.(2006), Philosophy of Science, Routledge
2. P. Chaddah.(2018) Ethics in Competitive Research: Do not get scooped: do not get plagiarized: ISBN: 9789387480865
3. National Academy of Science, National Academy of Engineering and Institute of Medicine. (2009). On Being a Scientist: A Guide to Responsible Conduct in Research, 3<sup>rd</sup> Edition, National Academies Press.
4. D. B Resnik.(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/what is /index.cfm](https://www.niehs.nih.gov/research/resources/bioethics/what%20is/index.cfm)
5. J.Beall,(2012).Predatory publishers are corrupting open access. Nature 489 (7415), 179-179 <https://doi.org/10.1038/489179a>
6. Indian National Science Academy (INSA), Ethics in Science Education, Research and Governance (2019), ISBN 978-81-939482-1-7
7. [http://www.insaindia.res.in/pdf/Ethics\\_Book.pdf](http://www.insaindia.res.in/pdf/Ethics_Book.pdf)

# **Quantitative Methods in Business Research**

## **(L-0, T-0, P-4, CH-1)**

**Course Code:** PCOM3013

**Course Title:** Quantitative Methods in Business Research (Practical)

**Credits:** 4

**Duration:** 1 Semester

**Total Marks:** 100 (Practical Exam = 70; Submission of Practical Copy = 30)

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### **Course Specific Outcomes (CO):**

Upon successful completion of the course, the students will be able to:

1. Learn how to handle databases like CMIE Prowess IQ, EPWRF time series etc.;
2. Bridge the gap between theory and practical applications;
3. Provide students with the knowledge to use open-source software like R and spreadsheet to solve the basic statistical problems;
4. Build an intuitive understanding of the most modern tools and techniques of business data analysis.

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## **Course Structure**

### **Unit I: Introduction to Research and Research Process**

Introduction: Handling of Data Set, Data for Econometric analysis- Cross-Sectional data, Time series data & Panel data. Sources of data; Basics of Data Analysis using Spreadsheet, & R.

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### **Unit II: Simple Linear Regression**

The Simple Linear Regression Model: Definition, specification and Assumptions, OLS Estimation, Properties of OLS Regression Line, Properties of Estimators, Properties of OLS Estimators, Measuring goodness of Fit, Analysis of Variance on OLS Regression, outliers.

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### **Unit III: Multiple Linear Regressions**

Introduction to Multiple Linear Regressions- Assumption, Model; Multicollinearity- Definition and Effect, Rules of Thumb in Determining the Degree of Collinearity; Heteroskedasticity- Definition and Concept, Evaluating the Existence of Heteroskedasticity ; Autocorrelation Basic Concept, The Durbin–Watson Statistics; Model Specification and Specification Bias

## **Unit IV: Panel Data Regression Models**

Panel Data Regression Models: Definition and Usefulness, Panel Data models, The Constant coefficients model (CCM), The Fixed-Effects Model, The Random Effects Model, Choosing between FEM and REM: The Hausman Test.

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## **Unit V: Time Series Econometrics**

Time series Econometrics: Background, Some important concepts, Tests for Stationarity, Spurious regression Problem. Forecasting Methods for time series data-Moving Averages, Exponential smoothing. Decomposition; Measuring forecast accuracy.

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### **Suggested Readings:**

1. Johnson, R. and Wichern, D., Applied Multivariate Statistical Analysis, Prentice Hall.
2. Gujarati, D.N. (Latest Edition), Basic Econometrics, McGraw-Hill Pvt. Ltd.
3. Greene, W. (Latest Edition), Econometric Analysis, Prentice Hall.
4. Bryman, A. Social Research Methods. New York: Oxford University Press.
5. Kothari, C. R. Research Methodology: Methods and Techniques. New Delhi: New Age International.
6. Lee, Cheng F., John C. Lee, and Alice C. Lee. Statistics for business and financial economics. Singapore: Springer World Scientific, 2010.
7. Kerns, G. J. Introduction to Probability & statistics using R, Singapore: Springer World Scientific, 2010.

## **Term Paper/ Dissertation (L-0, T-0, P-0, CH-4)**

**Course Code:** PCOM-3014

**Course Title:** 201204-202403

**Credits:** 4

**Duration:** 1 Semester

**Total Marks:** 100 Marks (Submission = 70, Viva-Voce = 30)

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### **Course Specific Outcomes (CO):**

Upon successful completion of the course, the students will be able to:

1. Submit an Annotated Bibliography based on Scopus/ Web of Science database(s).
2. Choose the appropriate methodology required for their proposed research topic
3. Write systematic review of literature on a particular topic worthy of publication in a referred journal.
4. Preparing a plan of work on proposed research topic.

### **Course Structure**

- Submission of an Annotated Bibliography
- Preparation and Submission of a report on Methodological Issues on Proposed Research Topic;
- Writing of Seminar Research Paper worthy of publication in a referred journal/ book;
- Preparing a Plan of Work on Proposed Research Topic. Presentation.

After which the Candidate has to prepare and submit a term paper on the proposed research topic to the department followed by Viva-voce on the submitted Term Paper.

### **Suggested Readings:**

1. <https://www.prisma-statement.org/>
2. <https://apastyle.apa.org/>
3. Biondi-Zoccai, G. (2016). Umbrella reviews. *Evidence synthesis with overviews of reviews and meta-epidemiologic studies Cham, Switzerland: Springer International*.
4. Petticrew, M., & Roberts, H. (2008). *Systematic reviews in the social sciences: A practical guide*. John Wiley & Sons.
5. Fredlund, M., Rogers, M., Orr, N., Kneale, D., Allen, K., & Thompson Coon, J. (2024). What are the methodological characteristics of evidence and gap maps? A systematic review and evidence and gap map. *Cochrane Evidence Synthesis and Methods*, 2(8), e12096.