The Hong Kong Polytechnic University

Subject Description Form

Subject Code	MM6004
Subject Title	Research Methods for Behavioural Research
Credit Value	3
Level	6
Pre-requisite / Co-requisite/ Exclusion	None
Objectives	This subject contributes to the achievement of the Research Postgraduate Programme Outcomes by: (a) strengthening students' critical thinking and analytical skills and (b) developing skills in enhancing effective communication of statistical analysis while (c) being able to apply concepts and statistical techniques for a specific research problem.
Intended Learning Outcomes *(note 1)*	Upon completion of the subject, students will be able to: a. Understand the advanced statistical techniques used by organizational researchers,particularly those in the fields of organizational behavior, human resource, and related domains, in the analysis of survey data. b. Have an awareness of the strengths and limitations of such techniques. c. Have acquired hands-on experience with the commonly used statistical packages.
Subject Synopsis/ Indicative Syllabus *(note 2)*	**Module 0: Revisiting Statistical Foundations** Concepts of central tendency (mean, median, mode) Measures of dispersion (variance, standard deviation) Correlation and regression analysis Hypothesis testing (t-tests, ANOVA, chi-square) Concepts of mediation and moderation Assumptions and limitations of statistical techniques **Module 1: Introduction to Multilevel Modeling** Concepts of multilevel modeling Estimation and interpretation of multilevel models Centering Collective level construct and aggregation tests Practical applications of multilevel modeling in organizational research **Module 2: Longitudinal Research Designs** Overview of longitudinal research designs Types of longitudinal data Issues related to data collection and analysis in longitudinal research

	Techniques for modeling longitudinal data, such as growth curve models, cross-lagged panel models, latent change score models, and dynamic structural equation models
	Module 3: Social Relations Designs
	Overview of social relations designs
	One-with-many designs, block designs, and round robin designs
	Data collection and analysis issues in social relations designs
	Techniques for analyzing social relations data, such as the social relations model
	Module 4: Advanced Topics in Organizational Research Methods
	Introduction to Microsoft Azure
	Prompt engineering in Generative AI
	Use of Azure OpenAI API for qualitative data analysis
	Use of Computer Vision API for image processing and information retrieval
Teaching/Learning Methodology *(note 3)*	During the course, the lecturer will cover various contemporary statistical analyses that are relevant to organizational research studies. To prepare for these sessions, students are expected to study all the assigned articles before class and lead discussions of the articles among their peers. Students will be evaluated based on their participation in class discussions. To adequately prepare for these sessions, students should familiarize themselves with all the assigned readings, not just the ones they are presenting on. Additionally, the lecturer may assign homework to students. It is important that students have access to R, RStudio, and Mplus on their laptop computers to facilitate their analysis of data during class.

Assessment Methods in Alignment with Intended Learning Outcomes

(note 4)

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)					
		a.	b.	c.			
Continuous Assessment*	**100%**						
1. Individual assignment	30%	✓	✓	✓			
2. Individual assignment and presentation	30%	✓	✓	✓			
3. In-class test	40%	✓	✓	✓			
Total	100 %						

*Weighting of assessment methods/tasks in continuous assessment may be different, subject to each subject lecturer.

To pass this subject, students are required to obtain Grade D or above in the Continuous Assessment components.

Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:

Students will be required to analyze and write reports based on data and facts of a particular case or a specific research problem. The presentation and other written assignments will improve their critical thinking and statistical skill as well as effective

	communication of statistical analysis. Feedback is given to students immediately following the presentations and all students are invited to join this discussion.	
Student Study Effort Expected	Class contact:	
	▪ Lectures and workshops	39 Hrs.
	Other student study effort:	
	▪ Self-study	78 Hrs.
	Total student study effort	117 Hrs.
Reading List and References	Klein, J. K & Steve W. J. Kozlowski, S. W. (2000) From Micro to Meso: Critical Steps in Conceptualizing and Conducting Multilevel Research. Organizational Research Methods, 211-236. Bliese, P. D. (2000). Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. In K. K. Klein & S. W. J. Kozlowski (Eds.), Multilevel theory, research, and methods in organizations (pp. 349-381). San Francisco, CA: Jossey-Bass. Chan, D. (1998). Functional relations among constructs in the same content domain at different levels of analysis: A typology of composition models. Journal of Applied Psychology, 83(2), 234. Mitchell, T.R., & James, L.R. (2001). Building better theory: Time and the specification of when things happen. Academy of Management Review, 26, 530-547. Ployhart, R., & Vandenberg, R. J. (2010). Longitudinal research: The theory, design and analysis of change. Journal of Management, 36, 94-120. Kozlowski, S. W., & Klein, K. J. (2000). A multilevel approach to theory and research in organizations: Contextual, temporal, and emergent processes. In K. J. Klein & S. W. Kozlowski (Eds.), Multilevel theory, research, and methods in organizations: Foundations, extensions, and new directions (pp. 3-90). San Francisco, CA: Jossey-Bass. The most updated reading list associated with "Research Methods for Behavioral Research" will be provided during the lecture. **Required Software (current versions):** R, Mplus, Microsoft Azure	