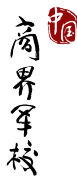




PHBS

北京大学汇丰商学院



MGT 580

Psychometric Methods in Management Third Module, 2025-2026

Course Information

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Office Hours: Monday & Thursday, 1:00 - 1:30 PM, or by appointment

TA (Session I): TBD

Office: PHBS Building, Room 213/214

Email: [TBD](#)

Office Hour: TBD

Classes:

Sessions: Monday & Thursday, 1:30 PM - 3:20 PM

Venue: PHBS Building, **ROOM TBD**

Course Document Website:

Course Management System

1. Course Description

1.1 Context

Course Overview

Purpose

The primary objectives of this course are to familiarize you with the fundamental concepts, methods, and principles of psychological measurement. Special emphasis will be placed on teaching you how to practically apply this knowledge and skill to empirical research work. You will first learn the methodology and then use the statistical software STATA to analyze data and explain the output in practical terms. Please note, detailed discussions on statistical techniques will not be included, as this material is covered in other courses.

Learning Goals

We will focus on three very specific learning goals. By the end of the course, you should have developed the ability to execute managerial research, apply STATA software to analyze research questions, and to give practical, supported explanations.

- Clarify your research question and meaningfully build up the corresponding research model as well as hypotheses.
- Understand and apply the appropriate analysis procedure to answer research questions and know why this process is the best way to execute.
- Have the ability to critique existing research work and analyze its strengths and weaknesses.

Prerequisites

This course is tailored for master's students in various social sciences or anyone conducting research in organizational contexts. While the course is not focused primarily on statistics, we will utilize fundamental statistical concepts in a broad, top-down approach. All students should have completed an introductory course in statistics, particularly one covering the basics of linear regression.

1.2 Textbooks and Reading Materials

Learning Materials

Readings and other materials in class will be used to highlight the knowledge and skill of fundamental management data analysis.

Required

- All essential readings are available on the Course Management System, and I will upload all slides before and after each class.
- There is no designated textbook for this class.
- The selected readings are chosen for their clarity, accuracy, non-technical nature, and brevity to ensure they are not overly time-consuming.

Additional Readings & Resources

- Saunders, M., & Lewis, P., & Thornhill, A. (2019). *Research methods for business students (8th ed.)*. Essex: Pearson Education Ltd. **(SLT)**
- Pedhazur, E. J., & Schmelkin, L. P. (1991). *Measurement, design, and analysis: An integrated approach*. Hillsdale, NJ: Lawrence Erlbaum. **(P&S)**
- Singleton, R. A., Jr., & Straits, B. C. (2017). *Approaches to social research (6th ed.)*. New York: Oxford University Press. **(S&S)**
- Fowler Jr, F. J. (2013). *Survey research methods (5th ed.)*. Sage publications. **(F)**
- **STATA**: Please install STATA by **March 9**.
 - UCLA Statistical Consulting: <https://stats.idre.ucla.edu/>
- **Survey Resource**: <http://www.obhrm.net/index.php/栏目:英文量表>
- **APA format (Final Paper Format)**: https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/general_format.html

1.3 Methodology and Accountabilities

Course Methodology

To achieve the stated learning goals, this course will be heavily weighted toward active learning – that is, in-class discussions, exercises, and cases. With this emphasis on active learning, you and your peers will contribute significantly to the learning that occurs in class. Your learning, therefore, is a mutual responsibility shared by you, your peers, and the instructor. The success of this learning method hinges on everyone’s commitment to a special set of accountabilities, as noted below.

Instructor’s Accountabilities

To ensure learning goals are achieved, my accountabilities for this course are:

- **Foster a classroom environment conducive to active learning**
- Determine reading assignments, cases, and exercises that stimulate active learning
- Provide clear feedback to students that encourages and enhances learning

Students’ Accountabilities

To ensure learning goals are achieved, students’ accountabilities for this course are:

- **Complete all assigned readings before each class**
- Actively contribute to class discussions and exercises
- Complete all assignments as scheduled to both enhance and demonstrate learning

Please come to class prepared to contribute to class discussion, which will encourage robust discussions and maximize learning.

2. Learning Outcomes

2.1 Intended Learning Outcomes

Learning Goals	Objectives	Assessment
1. Our graduates will be effective communicators.	1.1. Our students will produce quality business and research-oriented documents.	O
	1.2. Students are able to professionally present their ideas and also logically explain and defend their arguments.	O
2. Our graduates will be skilled in teamwork and leadership.	2.1. Students will be able to lead and participate in groups for projects, discussions, and presentations.	O
	2.2. Students will be able to apply leadership theories and related skills.	O
3. Our graduates will be trained in ethics.	3.1. In a case setting, students will use appropriate techniques to analyze business problems and identify ethical issues, provide solutions and rationales.	O
	3.2. Our students will practice ethics for the duration of the program.	O
4. Our graduates will have a global perspective.	4.1. Students will have international exposures.	
5. Our graduates will be skilled in problem-solving and critical thinking.	5.1. Our students will have a good understanding of fundamental theories in their fields.	O
	5.2. Our students will be prepared to face problems in various business settings and find solutions.	
	5.3. Our students will demonstrate competency in critical thinking.	O

2.2 Course Specific Objectives

“When you can measure what you are speaking about, and express it in numbers, you know something about it; when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind; it may be the beginning of knowledge, but you have scarcely, in your thoughts, advanced to the stage of science.”

~Lord Kelvin, 1891, pp. 80 – 81.

“We must measure what is measurable and make measurable what cannot be measured.”

---Galileo

Active Learning

As the instructor of this class, I will do my best to facilitate the learning process and create a positive learning environment, but in the end, what you gain from the class is largely determined by you and your colleagues. Therefore, every student in this class needs to be well prepared before class, actively participate in class, and diligently work on all assignments in class.

From General Ideas to Academic Language

The course is organized and facilitated in ways to help you clarify your potential research question as a meaningful academic output. Specifically, 1) we will learn how to analyze a question’s “value”, 2) we will use academic “language” to present your research question, 3) next, we will design a “tool (e.g., questionnaires)” to bring the evidence to exanimate the corresponding question, 4) we will learn how to use the software, STATA, to derive “numbers” to evaluate whether our data support our expectation and to come up with substantiated explanations as well. More importantly, through this process, I hope you will gain confidence in this procedure as it is one of the best ways to approach research questions, but at the same time I want you to be aware of its shortcomings.

Teamwork

Learning how to collaborate with others is a crucial skill in business. In life we rarely have the opportunity to work with a perfect group; therefore, the ability of being able to integrate and interact with team members to achieve a business goal is critical. Although this class mainly teaches methodological skill, the collaboration between you and your team members will be crucial in determining the quality of your final project. I encourage you to have regular interactions with your team members, ask each other thoughtful questions and have active discussions and debates on issues raised.

2.3 Assessment/Grading Details

Overall Grading Policy

Grading will be based on class participation, discussion, 3 time class exercises, 3 quizzes, and a group-based presentation and term paper. Points earned on each of the following assignments will be totaled.

	<u>Weight</u>	<u>Note & Due Date</u>
Participation & Discussion	20%	*Read Note Carefully
Quizzes & Exercises	45%	3/23, 4/13
Research Poster Section	20%	4/23
One-on-one final exam	15%	4/27

Expectations regarding Grades

The assumption in this class is that an A+, A, or A- must be *earned*, and such grades are reserved only for the students who truly excel based on class expectations. To earn an A or A+, students must demonstrate mastery of the material, exceptional analytical skills, and the ability to integrate interdisciplinary ideas and knowledge.

Some students may think that putting effort into a course would automatically earn them an “A” or “B” grade, regardless of the level of mastery of the learning outcomes for this course. In other words, some students mistakenly equate effort with mastery, which is not true.

There will be several quizzes and exercises given throughout the semester where students are required to submit the answers back to me. These answers should be brief and concise. Students must present the STATA result using descriptive everyday language rather than in technical terms only. This will be an important criterion used to grade the submitted answers.

Absences

Absences totaling more than three hours in a 3 unit class, four hours in any 4 unit class, and 5 hours in a 5 unit class automatically lower the final grade by one step (example: an A- to a B+). Each successive absence will, in turn, lower the grade by an additional step. Absences immediately before or after weekends or holidays or due to travel during the week are considered double absences. If a student is tardy to a class 4 times, it will count as 1 absence. Students are responsible for classwork during their absences.

*Plagiarism

Written answers in a quiz or exercise provide an important means of monitoring learning throughout the course. When these answers show that certain topics are not well understood, these topics will be reviewed in class. Students may consult with each other regarding the concepts and principles underlying the methods used. However, *written answers should represent the work of each individual student. Moreover, students must not obtain answers to homework questions from students who have previously taken this course or copy any other classmate’s answer.* Drawing from the work of current or past students is considered a violation of the honor code and carries the risk of failing the course and other appropriate sanctions. Students are also strongly encouraged to ask questions in class for discussion. These questions help us collectively address points of confusion and pursue issues that extend beyond the assigned readings.

(1) Participation & Discussion (20%)

Class activities will be based on the assumption that you are familiar with the materials presented on the course management system; therefore, you should be prepared for class and will be randomly called upon to discuss assigned materials. Your participation and discussion grade will reflect my assessment of your total contribution to the learning environment. Contributions to the learning environment can come in many forms- making observations, answering questions, summarizing others' views, commenting on other students' comments, or debating the instructor's view. *It is not the form or the frequency that matters but the extent to which what you say makes a contribution to your own or your peers' learning. Did your contribution move the conversation forward? Did it offer an alternative view that we had not considered? Did it provoke deeper thinking?* In other words, it is the quality of your contribution, not the quantity, that matters.

You cannot participate if you are absent. **Class attendance is required.** You should plan to attend every class and be on time for class. Participation and discussion scores for missed classes will be scored as a zero for that day. Please e-mail me if you know you are going to be absent – this will enable me to score your participation as “not present” rather than “not participating.” Finally, the quality of interactions in class will be strongly linked to your participation grade.

(2) Research Poster Section (20%)

You will present your team research project to the class on the poster section day. It will be a formal poster research presentation and will be worth 20% of the total grade. Each group will have approximately 15 minutes for the presentation (including Q&A). We will have peer ratings in some way at the same time. Peer evaluation will **NOT** affect the final grade of the evaluator or the presenter; however, it may be used to judge a student's contribution if there is concern whether the student is doing his or her share of work. Peer ratings will be kept strictly confidential.

- 3-5 team members in each group
- 15 minutes for presentation and Q&A
- **Research Poster Section date: April 23**
- Each group will research and choose a topic
- Use the knowledge you learned in class to analyze and evaluate the topic
- Teach us something we don't know.

Assessment criteria

- Present your ideas clearly
- Get the audience involved in your presentation
- Demonstrate that you understand the knowledge you have learned
- Show a solid logical analysis in your work
- Manage the presentation time properly
- Plan, organize, lead, and coordinate the presentation constructively and smoothly
- Overall impression.

(5) Quizzes + Exercise (45%)

Students will be given a set of 4 to 6 questions for each quiz. The questions will require students to think critically about and integrate all topics covered in the course. All quiz

answers should be typed. These three quizzes will be worth 30 pts. Please bring your laptop to class and turn in your answer file back to me via email. Please make sure you have confirmed with me that I have received your answer sheet before you leave the class.

The exercises in this course will be done in class and will require your application of research method skills to data. We plan to have three exercises at the end of this course. These exercises will help you and me to understand how much you learned from this class.

Policy on Missing the Deadline

For fairness's sake, we need a policy regarding missed deadlines for assignments and exams. Missing any deadline (e.g., group presentation PowerPoint, individual paper, and final exam sheet) will be penalized 5% for each day (24-hour period) beyond the due date.

2.4 Academic Honesty and Plagiarism

Moral code of conduct is to be observed strictly in all courses taken at Peking University HSBC Business School. This means that there will be no deceptive behavior in any work you submit. Students in Psychometric Methods in Management (Course Number 580) are bound by the Honor Code and the following specific guidelines for all works completed in this course.

- Individual work is to be completed without the assistance of others.
- Assignments identified as team-based work are to be completed by members of the team only.
- While group interaction is encouraged when studying, any work submitted under your name must be your own work.
- Plagiarism in any form, including the use of previous years' materials, will not be tolerated.
- Written deliverables must use appropriate citations to signify when arguments or analyses rely on the ideas or insights of others, including any class materials.
- Any use of class assignments or case analyses or any other material in any format from any course taught at any time in the past or present will be considered a violation of the Honor Code.
- Unless specific permission is granted to the entire class, when preparing a case, confine your analysis to the facts of the case, using your common sense and deductive reasoning to draw conclusions from the facts and information presented.
- If you use ideas that are not your own, you must give credit where credit is due.

All assessments are subject to an academic misconduct check. Misconduct checks may include reproducing the assessment, providing a copy to another member of the faculty, and/or communicating a copy of this assignment to the PHBS Discipline Committee. A suspected plagiarized document/assignment submitted to a plagiarism-checking service may be kept in its database for future reference purposes.

Where violation is suspected, penalties will be implemented. The penalties for academic misconduct may include: deduction of honour points, a mark of zero on the assessment, a fail grade for the whole course, and reference of the matter to the Peking University Registrar.

For more information of plagiarism, please refer to **PHBS Student Handbook**.

3. Topics, Teaching and Assessment Schedule

Class	Date	Topic / Content	Note
1	March 2	Foundation <ul style="list-style-type: none"> - Rules for this class - Syllabus clarification - A research example - Plagiarism <i>Readings</i> <ul style="list-style-type: none"> - SLT C1 	
2	March 5	Research Tools / Basic Statistical Knowledge <ul style="list-style-type: none"> - How to find your research question - STATA (TA) - Google Scholar, SSCI <i>Readings</i> <ul style="list-style-type: none"> - SLT C2, C3; PS C2 - Review Paper Sample: Pay Dispersion, Shaw 2014 	Group List March 5, 5PM
3	March 9		STATA ready (March 9)
4	March 12	Research Model / Variables / Hypotheses & Theories <ul style="list-style-type: none"> - Independent Variable - Dependent Variable - Moderator - Mediator - Levels of Analysis - Rater / Common Method Bias Research Idea Discussion - I <ul style="list-style-type: none"> - Discuss your research model <i>Readings</i> <ul style="list-style-type: none"> - SLT C5; PS C8, C9)
5	March 16		
6	March 19	Reliability & Validity, Survey / Questionnaires <ul style="list-style-type: none"> - Design procedure Research Idea Discussion - II <ul style="list-style-type: none"> - Discuss your research model <i>Readings</i> <ul style="list-style-type: none"> - SLT C11, C12 	Quiz 1 3/23 Tentative
7	March 23		
8	March 26	Measurement / Factor Analysis / Survey Design <ul style="list-style-type: none"> - Non-experimental operationalizations of constructs - EFA, CFA...more - Questionnaire order 	
9	March 30		

10	April 2	Multiple Regression / Incremental Validity	
11	April 8	- Moderated Regression - Mediated Regression	
12	April 9	Extra Analysis - t-test - ANOVA - Fundamental Concepts in the Design of Experiments	
13	April 13	Exercise I - Research Case I	Quiz 2 4/13 Tentative
14	April 15	Exercise II - Research Case I	
15	April 16	Exercise III - Research Case III	
16	April 20	TBD Quiz 3	
17	April 23	Research Poster Section	
18	April 27	One-on-one final exam	TBD

Note: This schedule may be modified as needed.