Course Code
Course Name: Business Mathematics(Statistics session)
1st Module, Academic Year: 2020-2021

Course Information

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Classes:
Lectures: Day, Time
Venue: PHBS Building, Room

Course Website:
If any.

1. Course Description

1.1 Context

Course overview: to understand the usefulness of statistical inference and analysis

Prerequisites: No

1.2 Textbooks and Reading Materials

(1) Lecture notes by myself
(2) Reference book: probability and statistical inference (ninth edition) by Hogg, Tanis, Zimmerman

2. Learning Outcomes

2.1 Intended Learning Outcomes

Learning Goals	Objectives	Assessment (YES with details or NO)
1. Our graduates will be effective	1.1. Our students will produce quality business and research-oriented documents.	Yes

communicators.	1.2. Students are able to professionally present their ideas and also logically explain and defend their argument.	Yes
2. Our graduates will be skilled in team work and leadership.	2.1. Students will be able to lead and participate in group for projects, discussion, and presentation.	Yes
	2.2. Students will be able to apply leadership theories and related skills.	Yes
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 the ethical aspects, provide a solution and defend it.	Yes
	3.2. Our students will practice ethics in the duration of the program.	Yes
4. Our graduates will have a global perspective.	4.1. Students will have an international exposure.	Yes
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.	Yes
	5.2. Our students will be prepared to face problems in various business settings and find solutions.	Yes
	5.3. Our students will demonstrate competency in critical thinking.	Yes

2.2 Course specific objectives

To help students to understand the statistical inference and further prepare for advanced classes such as econometrics, big data and machine learning.

2.3 Assessment/Grading Details

Midterm (50%) (13/10/2020) Final (50%) (17/11/2020)

2.4 Academic Honesty and Plagiarism

It is important for a student's effort and credit to be recognized through class assessment. Credits earned for a student work due to efforts done by others are clearly unfair. Deliberate dishonesty is considered academic misconducts, which include plagiarism; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; or altering, forging, or misusing a University academic record; or fabricating or falsifying of data, research procedures, or data analysis.

All assessments are subject to academic misconduct check. Misconduct check may include reproducing the assessment, providing a copy to another member of faculty, and/or communicate 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 purpose.

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*.

Topics, Teaching and Assessment Schedule

08/09/2020 Basic statistics concepts (I): mean, variance, expectation

and distribution

15/09/2020 Basic statics concepts (II): covariance, correlation and distribution

22/09/2020 Conditional and marginal pdf or pmf, bivariate distribution

29/09/2020 Estimation and consistency (I), maximum likelihood estimation (MLE)

13/10/2020 Midterm

20/10/2020 Consistency (II). MLE and moment generating function(MGF)

27/10/2020 MGF and distribution

03/11/2020 Mean squared error (MSE) and testing procedures

10/11/202 Testing procedures

3. Miscellaneous