SCHOOL OF ECONOMICS, SINGAPORE MANAGEMENT UNIVERSITY

Academic Year 2024 – 2025, Term One

COR-STAT1202-X, Introductory Statistics X, Held Every Week

Rosie Ching, rosieching@smu.edu.sg, +65 68280587, 90 Stamford Road, School of Economics Level 5, Room 5048, Singapore Management University. Consultations: Regularly refer to **Statistics Consultations (RC).pdf** on Week Zero.

FIRST 4 SECTIONS: BY SMU

ACADEMIC INTEGRITY

All acts of academic dishonesty (including, but not limited to, plagiarism, cheating, fabrication, facilitation of acts of academic dishonesty by others, unauthorized possession of exam questions, or tampering with the academic work of other students) are serious offences. All work (whether oral or written) submitted for purposes of assessment must be the student's own work. Penalties for violation of the policy range from zero marks for the component assessment to expulsion, depending on the nature of the offence. When in doubt, ask me. The SMU Code of Academic Integrity may be accessed at https://smu.sharepoint.com/sites/oasis/SitePages/DOS-WKLSWC/UCSC.aspx.

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ACCESSIBILITY

SMU strives to make learning experiences accessible for all. If students anticipate or experience physical or academic barriers due to disability, please let me know immediately. Students are also welcome to contact the university's disability services team if you have questions or concerns about academic provisions: DSS@smu.edu.sg. Please be aware that accessible tables in the seminar room should remain available for students who require them.

DIGITAL READINESS FOR TEACHING AND LEARNING (DRTL)

As part of emergency preparedness, instructors may conduct lessons online via the Zoom platform during the term, to prepare students for online learning. During an actual emergency, students will be notified to access the Zoom platform for their online lessons. The class schedule will mirror the current face-to-face class timetable unless otherwise stated.

THE REST BY ME

COURSE OVERVIEW

Statistics abounds in our everyday lives, from economics to physics, accountancy to medicine, business to technology, geography to law, social science to politics, a veritable all-embracing giant. No discipline does well that disavows it or belittles it. Though many occupations may not require specialized statistics degrees, they demand at least a working understanding of statistics, and able competency with data crunching, statistical software and results management.

LEARNING OBJECTIVES

This course gives students an introduction from the basics to mid-level statistics and applications in running analyses through manual means plus Excel, with interpretation through practical cases and examples. By the end of this course, students will have mastered descriptive and summary statistics, probability axioms, discrete univariate probability distributions, continuous univariate distributions, regression, means, variance, covariance, sampling distributions, central limit theorems, point *v.* interval estimations, one-, two-, multiple-sample hypothesis tests; and

- know the principles and elements of basic statistics;
- summarise data sets into meaningful information;
- perform appropriate statistical procedures and write sound interpretations for use in practical decision-making.

ASSESSMENTS

The assessment will be based on the following **broad criteria**, to be elaborated upon.

Participation:	10 – 15%	Project:	40 – 50%
Tests:	20 – 25%	Final Paper:	20 – 30%

BOOK REFERENCES

The notes I give are sufficient. No reference is compulsory. Little prior knowledge beyond everyday, everyman statistics is needed as all will begin from *er*.. the beginning. The SMU Li Ka Shing Library holds the list overleaf and other reliable statistics titles (Lind, Bowerman, Doane, etc.)

Up-To-You's include:

- "*Statistics for Managers Using Microsoft Excel*" by Levine (Pearson Prentice-Hall, Global Edition with PHSTAT)

- "*Statistical Techniques in Business and Economics*" by Lind, Marchal, Wathen (McGraw-Hill/Irwin, 18th Edition with MEGASTAT)

MATERIALS COVERED IN TESTS AND EXAMINATION

Besides the chapters in the **Course Schedule,** students are responsible for everything else I give throughout the course.

- Quizzes, tests and the final are on ***covered*** content, all given way in advance and hence in more than good time.

POLICY ON ATTENDANCE

Active participation is essential, barring illnesses or other excused absences. Missing a class means forfeiting opportunities to contribute to discussions and activities. As a result, every missed session, with the exception of an "***Excused Absence***", may erode the class participation grade.

Excused Absence: an absence covered by any one of the following:

- A medical certificate (M.C.) or a doctor's letter
- A letter from your school, superior or parties relevant, for reasons of absence, submitted directly to me *in advance*, stating clearly what will be missed. (test/quiz/class/rehearsal)
- If absence for any assessments is a valid "*Excused Absence*", the student is responsible for seeking my advice about the missed assessments.
- Never should there be any overlap of any other course, module or activity with that of the regular weekly statistics class. If ever in doubt, make a bee-line for me.

Unexcused Absence: Policy for fairness is that these receive zero for missed assessments.

COR-STAT1202-X COURSE SCHEDULE:

*This is only a rough guide. I will inform you **well in advance** of key dates.*

1. At this point, the project is not confirmed. It can only be confirmed as late as 2-3 weeks before the start of term.
2. The project will be an extremely hands-on exercise with surveying in field work, and a fluid flow of results, follow-up, and statistical analysis and finally presentations. Students will be grouped within the same class, and all working on the same project in different parts of Singapore. All meetings will take place at the Mochtar Riady Auditorium, Ngee Ann Kongsi Auditorium, or the School of Law Halls.
3. Potential discomfort may be encountered with sensitive topics like mental illness, caregiving, dementia, self-harm, end-of-life affairs, cancer, visual impairment, hearing impairment. All guidance and helplines will be given in SMU eLearn Week Zero, including help offered by the SMU Counselling Centre counsellors and through external national helplines like SOS.

STAT-X PLAN

Week 0: Monday, 12 August 2024	**Mass introduction, release of STAT-X project, meeting with STAT-X partners**
Weeks 1-5: 19 August – 20 September 2024	Start of data collection, statistical training
Week 6-7: 20 September – 8 October 2024	Data cleaning & dossier release by Sitting Chief Donkey
Week 8: 10 October 2024	Half-term meeting with partner
Week 12: 7 November 2024	Project submission to Sitting Chief Donkey
Week 13:	Final lessons & rehearsals, including full-dress rehearsal
Week 14: Monday, 18 November 2024	The Finalé
Week 15:	Final Examination

COURSE SCHEDULE: *This is a **rough guide**, unless where marked **Confirmed**. I will inform you **well in advance** of key dates.*

Week	Topics
0	Meeting with Partner Priming and start of PROJECT STAT-X
1	Data Types & Graphs ➔ Chance
2	Categorical Data ➔ One Sample Continued from Week 1
3	Categorical Data ➔ Two Samples ➔ Multiple Samples Continued from Week 2
4	Numerical Data ➔ Continuous ➔ One Sample Continued from Week 3
5	Numerical Data ➔ Continuous ➔ Two Samples Continued from Week 4, survey winding up, all data submitted by end of Week 5
6	Numerical Data ➔ Continuous ➔ Multiple Samples Students' rest from project Mass data cleaning and preparation by Sitting Chief Donkey
7	Sample Size Determination Students' rest from project Mass data cleaning and preparation by Sitting Chief Donkey
8	**Term Break** Students' statistics dossier released Formal mid-term with company partners
9	Numerical Data ➔ Discrete
10	**EVENING TERM TEST (Classes As Usual)** Saturday morning 5 March 2024, 0900 hours Format: F2F ***In class***: Numerical Data ➔ More Continuous
11	Training ➔ Onwards to the Finalé
12	Training ➔ Onwards to the Finalé
13	**Catch-Up Week (Classes As Usual)** Rehearsals, including full-dress rehearsal
14	**FINALÉ** Monday, 18 November 2024, 1400 – 1730 hours
15	**FINAL EXAMINATION**