ECO 204 (**Sec - 1**), Spring 2025
Statistics for Business and Economics - II

East West University

Instructor: Shaikh Tanvir Hossain	**Schedule:** Sundays (AB1 - 201): 3:10 PM - 4:40 PM
Email: tanvir.hossain@ewubd.edu	Thursdays (AB3 - 401): 3:10 PM - 4:40 PM

§. Office Hours:

Sundays 10.00 AM - 1.00 PM (Room - 344). It's preferable to come during this time! However if you are struggling and need help, then please let me know.

§. Course Description:

This is a continuation of the course ECO104. The students will be introduced to **Inferential Statistics**, and the core topics are:

1. Point and Interval Estimation of Mean and Proportion (one sample and two sample problems)
2. Hypothesis Testing of Mean and Proportion (one sample and two sample problems)
3. Simple and Multiple Linear Regression Model, Estimation and Testing.
4. Basic Time Series Analysis
5. Goodness of Fit test and some Non-Parametric Tests (e.g., sign test and rank test), if time permits!
6. Analysis of Variance Techniques.

The course follows a balanced approach between theory and practice. Students will learn the concepts and also apply them using **R**. There will be a lab project to evaluate the applied skills.

§. Prerequisite Courses:

ECO101 and ECO104 offered at the East West University.

§. Textbooks / Notes:

There will be lecture notes (typed), and you should definitely read that first. In addition, I recommend to use any of the following books for exercises and practice problems.

1. Anderson, Sweeney, Williams, Camm, Cochran, Fry and Ohlmann (2020)
2. Newbold, Carlson and Thorne (2020)

Following books are a bit advanced at this level, but nevertheless these are also excellent references. In particular if you are an Economics students, you should look into Wooldridge (2019).

- DeGroot and Schervish (2012)
- Casella and Berger (2002)
- Wooldridge (2019)

§. Marks Distribution

Problem Sets	5%
Quizzes	8%
Attendance	5%
Lab Project	12%
Midterm - 1	20%
Midterm - 2	20%
Final	30%

§. Dates and Calendar

There is a calendar for the course, please use this link - https://docs.google.com/spreadsheets/d/1GyO5 1wt9WOOc6d8i-g36fnooxwhxncsOTi1av4XaVEc/edit?usp=sharing, it has all the midterm, quiz and problem set dates. If you are in the Discord server, you already have the link!

§. Problem Sets, Quizzes and Lab Project

- **Problem Sets:** There will be 3 big problem sets, two before two midterms and one before the final.

- **Quizzes:** In total there will be 3 quizzes, I will take the average of best 2.

- **Lab Project:** Lastly, there will be a Lab Project. We will talk about the details later in class.

§. Attendance and Participation Points

Attendance Points: Attendance counts for 5 points (out of 100). There are 23 lectures in total, but you only need to attend lectures starting from the 5th one (which makes 19 lectures). To get all 5 points, you must attend at least 17 of these 19 lectures. If you miss more than 2 lectures, each extra absence will cost you 0.5 points.

Participation Points: Participation also has 5 points as bonus points, however to be eligible for participation points, you must attend those 17 lectures (out of 19). This is how it works - during class, I will ask questions, for every 3 correct answers, you'll receive 1 point and in this way you can earn up to 5 points if you answer 15 correct answers. If you don't answer, you won't lose any points. So bottom-line it's simply a chance to earn some additional points for sincere and regular students.

§. Grading Scheme:

Check EWU grading policy. I will follow the standard grading policy.

§. Harassment and Respect Policy

Our university is committed to providing a safe and friendly environment for everyone. Harassment or discrimination based on race, color, gender, ethnicity, or any other personal characteristic is strictly prohibited. All students are expected to treat each other with respect and dignity. If I observe any behavior that violates these standards, I will report it to the university authorities for prompt action.

§. Lastly.....

Please try to be punctual at class. Regular attendance is important, the course is relatively fast-paced, and missing a class can be a big loss.You are expected to maintain highest level of *academic honesty*, this means, you should perform all academic activities *without any form cheating, lying, stealing, plagiarism, receiving unauthorized assistance or using any source of information that is prohibited* to use. Finally there might be minor changes in the outline or plan because of unexpected events, but if this happens you will be informed in the class as soon as possible.

§. References:

Anderson, D. R., Sweeney, D. J., Williams, T. A., Camm, J. D., Cochran, J. J., Fry, M. J. and Ohlmann, J. W. (2020), *Statistics for Business and Economics*, 14th edn, Cengage, Boston, MA.

Casella, G. and Berger, R. L. (2002), *Statistical Inference*, 2nd edn, Thomson Learning, Australia ; Pacific Grove, CA.

DeGroot, M. H. and Schervish, M. J. (2012), *Probability and Statistics*, 4th edn, Addison-Wesley, Boston.

Newbold, P., Carlson, W. L. and Thorne, B. M. (2020), *Statistics for Business and Economics*, 9th edn, Pearson, Harlow, England.

Wooldridge, J. M. (2019), *Introductory econometrics: A modern approach*, 7th edn, Cengage learning.