ECON 662 D1: Graduate Econometrics Term 1

Instructor: Saraswata Chaudhuri

Email: saraswata.chaudhuri@mcgill.ca

Office Hours: TBA

Lecture Time: Tu & Th: 11:35-12:55

Location: LEA 424

Description:

ECON 662D1 is the first course in graduate Econometrics at McGill. The objective of this course is to introduce you to the foundational concepts behind the econometric tools/methods that are commonly used in applied research. We will develop these methods; learn the relevant statistical theory that will allow us to use these methods judiciously; learn basic programming using statistical software like **Matlab** and **STATA** that will help us to implement these methods in practice and also verify some the underlying statistical theories with the help of Monte Carlo simulations. And very importantly, we will learn how to interpret the results that we will obtain using these methods. We will focus on two such methods: least squares estimation and maximum likelihood estimation. The fundamental ideas behind these two are very different; however, both are based on the optimization principle that you will eventually use extensively in your second year to study and develop various other estimation methods.

Textbook:

There are many great textbooks in econometrics that will discuss least squares and maximum likelihood estimators in detail. You can pick any one of them and read the relevant chapters from there. In my opinion, the book "**Econometric Theory and Methods**" by Russell Davidson and James McKinnon will be most useful for us. So this is going to be the textbook for our class. You can check the online resources for the textbook here. We will cover **Chapters 1-12** of this book during the semester.

The online textbook by Bruce Hansen is also a great resource; read it. In addition, I will probably assign problems from another textbook: "Econometric Analysis" by William Greene.

Evaluation:

Percentages refer to the entire year's grade.

- First term (ECON 662D1): 37.5%
- Second term exam (Final given by Professor Zinde-Walsh): 37.5%
- Term paper (due by the last class in April): 25%

I am responsible for the first term and also partly responsible for the term paper. The 37.5% grade for the first term will be based on your performance in 2 exams and 12 homework assignments. The first, i.e., the midterm exam will be on Oct 27 and will carry 13% weight, the other exam will be at end of the first term and will carry 12.5% weight, while each homework will carry 1% weight.

Some preliminary work for the term paper should be submitted for review in December.