

Math Camp 2025

Jinpeng Shi

August 18-22, 2025

Contact

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You must use your official **Mason email** for class communication. I encourage you to add **Math Camp** to the subject line, as this will help me prioritize your email.

Description

The aim of this course is to review some mathematical concepts in preparation for the first-year courses. We will cover topics in logic, algebra, linear algebra, and calculus.

Recommended Texts:

- Dowling, Edward T. *Theory and problems of introduction to mathematical economics*. MC Graw Hill Education, 2001.
- Osborne, Martin J. *Mathematical methods for economic theory*. University of Toronto, 2016.
- Sydsæter, Knut, and Peter J. Hammond. *Essential mathematics for economic analysis*. Pearson Education, 2008.

Format

This is an online course with two teaching modes, they both cover the same materials outlined in the course schedule.

- Asynchronous: Pre-recorded lecture videos that can be viewed at your own pace. Course materials are available on [Canvas](#). You can find it under “**Economic Graduate Students->Modules->MATH CAMP 2025**”.

- Synchronous: I will host a 2-hour discussion session at 6-8pm everyday.
The first hour is dedicated to cover course materials that are reviewed in asynchronous lecture. The second hour is reserved for Q&A.
You can access our daily meeting through here: [Zoom link](#).

Tentative Course Schedule

| Date | Topic | References |
|--------|--------------------------------------|---------------------------------------|
| Aug 18 | Basic Algebra, Derivative | Dowling: Chapter 1, 3, 4.1-4.2 |
| Aug 19 | Linear Algebra | Dowling: Chapter 10, 11 |
| Aug 20 | Calculus | Dowling: Chapter 5, 14, 15 |
| Aug 21 | Differential Equations, Optimization | Dowling: Chapter 4.5-4.6, 6.5-6.6, 16 |
| Aug 22 | Comparative Statics | Dowling: Chapter 13 |