

Mathematics for Management

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Department of International Business

National Taiwan University

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Class hours: Friday 14:20 – 17:20

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OBJECTIVE: The students would have a solid knowledge of linear algebra after taking this course, and therefore get well prepared for a graduate course in econometrics.

Textbook

1. Williams, Gareth, 2008, *Linear Algebra with Applications*, 6th ed., Jones and Bartlett Publishers.

References

1. Johnston, Jack and John DiNardo, 1997, *Econometric Methods*, 4th ed. Appendix A., McGraw-Hill.
2. Searle, Shayle R. and Lois Schertz Willett, 2001, *Matrix Algebra for Applied Economics*, Wiley.
3. Strang, Gilbert. 2006, *Linear Algebra and Its Applications*, 4th ed., Thomson

TOPICS (tentative): Functions, Linear Transformations, Euclidean Spaces, Vector Spaces, Matrix Algebra, Trace, Inverse, Rank, Determinant, Systems of Linear Equations, Partitioned Matrices, Eigenvalues and Eigenvectors, Quadratic Form, Definite Matrices, Multivariate Normal Distribution and Quadratic Forms, Matrix Differentiation, Constrained Optimization.

GRADING: Team's Homework: 40%. Two Mid-Term Exams: 40%. Final Exam: 20%.

