GRADUATE STUDIES-ECONOMICS (GSE)

GSE Courses

GSE 500. Independent Study. 1-4 units
Term Typically Offered: TBD
Prerequisite: Consent of department head.
Advanced study planned and completed under the direction of a
departmental faculty member. Open only to graduate students
demonstrating ability to do independent work. Enrollment by petition.

GSE 510. Essential Mathematics for Economic Analysis. 4 units
Term Typically Offered: SU
Prerequisite: Graduate standing. Recommended: MATH 206, MATH 244,
or MATH 408.
Review and discussion of the basic math tools needed for graduate work
in economics, including set theory, linear algebra, properties of functions,
static and dynamic optimization. 4 lectures.

GSE 511. Microeconomic Analysis. 4 units
Term Typically Offered: F
Prerequisite: Concurrent enrollment in GSE 510 and graduate standing.
Basic microeconomic theory including theory of the firm, consumer
together with general equilibrium, capital theory, and welfare economics. 4
lectures.

GSE 512. Macroeconomic Analysis. 4 units
Term Typically Offered: W
Prerequisite: GSE 511 and graduate standing.
Basic macroeconomic theory including markets for commodities and
credit, the demand for money, market-clearing and the labor market,
inflation and interest rates, investment, real business cycles and
unemployment, economic growth, government consumption and the role
of public services, and taxes, transfers, and the public debt. 4 lectures.

GSE 518. Essential Statistics for Econometrics. 4 units
Term Typically Offered: SU
Prerequisite: Graduate standing. Recommended: MATH 206 or MATH 244
or GSE 510.
Statistical concepts for use in theoretical and applied econometric
applications including random variables, independence, expectations,
probability, distributions, covariance and correlation, large sample theory,
and properties of estimators. 4 lectures.

GSE 520. Advanced Econometrics I. 4 units
Term Typically Offered: F
Prerequisite: GSE 518 and graduate standing. Recommended: ECON 339.
The use of statistical procedures to measure theoretical economic
relationships and to verify and reject theories. Advanced coverage of
regression analysis and hypothesis testing. 4 lectures.

GSE 522. Advanced Econometrics II. 4 units
Term Typically Offered: W
Prerequisite: GSE 520 and graduate standing.
Use of statistical procedures to deal with simultaneous equations,
limited dependent variables and time-series data. Includes methods of
instrumental variables, generalized method of moments and maximum
likelihood. 4 lectures.

GSE 524. Computing and Machine Learning for Economics. 4 units
Term Typically Offered: F
Prerequisite: Graduate standing.
Use of computers for advanced data analysis in economics and
analytics. Topics include computer programming using statistical
software, data gathering and cleaning, and machine learning. 4 lectures.

GSE 526. Microeconometrics. 4 units
Term Typically Offered: W
Prerequisite: GSE 520 and graduate standing. Recommended: GSE 524.
Variety of standard and advanced econometric techniques employed
in applied microeconomics. Emphasis on when and how to apply
appropriate techniques. 4 lectures.

GSE 532. Environmental and Natural Resource Economics. 4 units
Term Typically Offered: TBD
Prerequisite: GSE 511 and graduate standing.
Economic analysis of pollution, congestion, public good provision, and
natural resource conservation. Static and dynamic efficiency, economic
growth and sustainability, pollution taxes, marketable permits, and the
design of market-based regulations. 4 lectures.

GSE 534. International Economics. 4 units
Term Typically Offered: TBD
Prerequisite: GSE 511 and graduate standing.
Analysis of the international movement of goods, services, capital and
payments. The role of exchange rates, tariffs, quotas, and transport
costs. Relationship between international trade and economic growth. 4
lectures.

GSE 536. Public Economics. 4 units
Term Typically Offered: TBD
Prerequisite: GSE 511 and graduate standing.
Economic analysis of the rationale for public expenditure and taxation.
Externalities, pollution and public policy, income redistribution and public
welfare, public goods, collective choice and political institutions, public
budgeting techniques and cost-benefit analysis, taxation and tax policy,
state-local finance and fiscal federalism. 4 lectures.

GSE 538. Industrial Economics. 4 units
Term Typically Offered: SP
Prerequisite: GSE 511 and graduate standing.
Economic theories of industrial organization with specific reference to
such topics as cartels, market concentration and performance, vertical
integration, franchise contracts, ownership and control of firms, multipart
and discriminatory pricing, and tie-in sales. Economic aspects of antitrust
law and government regulation of industry. 4 lectures.
GSE 542. Advanced Labor Economics. 4 units
Term Typically Offered: SP
Prerequisite: GSE 522 and graduate standing, or consent of instructor.
Recommended: GSE 526.

Research methods in labor economics and application of modern empirical techniques to the analysis of labor markets. Topics include labor supply and demand, discrimination, migration, and human capital accumulation. 4 lectures.

GSE 544. Evidence-Based Decision Analysis. 4 units
Term Typically Offered: SP
Prerequisite: GSE 520 and graduate standing. Recommended: GSE 524 and GSE 526.


GSE 570. Selected Advanced Topics. 1-4 units
Term Typically Offered: TBD
Prerequisite: Graduate standing or consent of instructor.

Directed group study of selected topics for graduate students. Open to undergraduate and graduate students. The Class Schedule will list topic selected. Total credit limited to 8 units. 1 to 4 lectures.

GSE 580. Seminar in Economics. 1-4 units
Term Typically Offered: TBD
Prerequisite: Graduate standing.

Advanced topics in economics chosen according to the common interests and needs of the students enrolled. The Class Schedule will list topic selected. 1 to 4 seminars. Total credit limited to 5 units.

GSE 599. Thesis. 4 units
Term Typically Offered: TBD
Prerequisite: Graduate standing and consent of thesis committee.

Individual research under the general supervision of the faculty, leading to a graduate thesis of suitable quality. Minimum of 8 units required for degree.