

# Commerce and Economic Development - CPS (CED)

## **CED 5010. Applied Microeconomic Theory 1. (2.25 Hours)**

Covers decision theory, theory of the firm, and consumer behavior; introduction to general equilibrium theory and welfare economics; game theory, including extensive form solution concepts, bargaining, and repeated games; and information economics, contract theory, and mechanism design.

## **CED 5020. Applied Macroeconomic Theory 1. (2.25 Hours)**

Surveys the policy and practice of macroeconomics, exploring the link between economic theory and current economic policy. Introduces students to the variables used for macroeconomic analysis, such as national output, unemployment, interest rates, government debt, and inflation. Emphasizes the tools used for analyzing current macroeconomic policies, such as fiscal policy and monetary policy.

## **CED 5030. Mathematical Methods for Economics 1. (2.25 Hours)**

Covers applications of mathematics to economics: functions, simultaneous equations; linear models and matrix algebra; determinants, inverse matrix, Cramer's rule; differentiation and optimization of functions of one or more variables; quadratic forms, characteristic roots and vectors, constrained optimization; and interpretation of the Lagrange multiplier. Applies techniques to examples from the theory of the firm and consumer behavior.

## **CED 5040. Applied Econometrics. (2.25 Hours)**

Studies statistical tools used to estimate economic relationships. Discusses the linear regression model. Introduces topics relevant to the analysis of economic data, including instrumental variables, discrete choice modeling, panel data analysis, and program evaluation.

## **CED 5050. Commerce and Economic Development. (2.25 Hours)**

Explores introductory material in economics, finance, and mathematics relevant for graduate studies. Covers basic concepts of micro- and macroeconomics, statistics, optimization, and market basics.

## **CED 6010. Applied Microeconomic Theory 1. (3 Hours)**

Covers decision theory, theory of the firm, and consumer behavior; introduction to general equilibrium theory and welfare economics; game theory, including extensive form solution concepts, bargaining, and repeated games; and information economics, contract theory, and mechanism design.

**Prerequisite(s):** CED 6050 with a minimum grade of C-

## **CED 6011. Applied Microeconomic Theory 2. (3 Hours)**

Offers a deep exploration into game theory, including extensive form solution concepts, bargaining, repeated games, information economics, contract theory, and mechanism design.

**Prerequisite(s):** CED 6010 with a minimum grade of C-

## **CED 6020. Applied Macroeconomic Theory 1. (3 Hours)**

Develops a coherent framework for analyzing the determination of macroeconomic variables such as national output, unemployment, interest rates, government debt, and inflation. Explores the link between economic theory and current economic policy. Offers students an opportunity to learn the tools to analyze current macroeconomic policies.

## **CED 6021. Applied Macroeconomic Theory 2. (3 Hours)**

Exposes students to the skills needed for interpreting macroeconomic data and macroeconomic policy. The course is designed to provide a link between economic theory and current economic policy and to provide students with the tools to analyze current macroeconomic policies.

**Prerequisite(s):** CED 6020 with a minimum grade of C-

## **CED 6030. Mathematical Methods for Economics 1. (3 Hours)**

Covers applications of mathematics to economics: functions, simultaneous equations; linear models and matrix algebra; determinants, inverse matrix, Cramer's rule; differentiation and optimization of functions of one or more variables; quadratic forms, characteristic roots and vectors, constrained optimization; and interpretation of the Lagrange multiplier. Applies techniques to examples from the theory of the firm and consumer behavior.

## **CED 6031. Mathematical Methods for Economics 2. (3 Hours)**

Explores applications of mathematics to economics: differentiation and optimization of functions of one or more variables; quadratic forms, characteristic roots and vectors, constrained optimization; interpretation of the Lagrange multiplier. Applies techniques to examples from the theory of the firm and consumer behavior.

**Prerequisite(s):** CED 6030 with a minimum grade of C-

## **CED 6040. Applied Econometrics. (3 Hours)**

Studies statistical tools used to estimate economic relationships. Discusses the linear regression model. Introduces topics relevant to the analysis of economic data, including instrumental variables, discrete choice modeling, panel data analysis, and program evaluation.

**Prerequisite(s):** CED 6030 with a minimum grade of C-

**CED 6041. Applied Econometrics II. (3 Hours)**

Focuses on specific topics in instrumental variables, discrete choice modeling, panel data analysis, program evaluation, and empirical strategies for applied micro research. The purpose of this course is to provide students with a solid foundation in econometric techniques with a focus on techniques that are commonly used in applied economics. Seeks to help students understand issues in connecting data, statistics, and economic theory and to read and precisely understand the econometrics typically used in empirical research for practical and academic purposes. These tools are of practical use to any student who plans on confronting data in their academic and professional work.

**Prerequisite(s):** CED 6030 with a minimum grade of C- ; CED 6040 with a minimum grade of C-

**CED 6050. Commerce and Economic Development. (3 Hours)**

Explores introductory material in economics, finance, and mathematics relevant for graduate studies. Covers basic concepts of micro- and macroeconomics, statistics, optimization, and market basics.

**CED 6051. Open Economy Macroeconomic Analysis. (3 Hours)**

Examines key issues in open economy macroeconomics, including the foreign exchange market, international monetary arrangements, the balance of payments and current account imbalances, national income accounting, the effectiveness of monetary and fiscal policies in open economies, the determinants of exchange rate changes, and the economics of monetary integration.

**Prerequisite(s):** CED 6050 with a minimum grade of C-

**CED 6070. Economics of Human Capital. (3 Hours)**

Focuses on an economic analysis of the labor market, the labor force, and workers' wages and earnings. Includes other topics such as the demand for labor by businesses and industries; wage inequality and its determinants; the changing occupational and industrial structure; the economic impact of unions; and the influence of related labor market institutions and relevant public policies, including minimum wages, wage subsidies, and earned income tax credits. Aims to help early stage entrepreneurs to understand issues of human labor.

**CED 6090. Cultural Economic Development. (3 Hours)**

Examines the role of markets in art, culture, and entertainment in economic development. Includes topics such as the role of the creative economy in attracting tourists and industry and in driving economic growth and the strategic impact of a creative export sector. Explores additional topics such as an analysis of the economics of historic preservation and tourism—for example, rehabilitating historical buildings, funding museums and symphony orchestras, and encouraging traditional arts and tourist activities—to lead job growth and spur economic vitality.

**CED 6110. Law and Economics. (3 Hours)**

Addresses topics such as property rights, regulation, income distribution applied to health and safety, the environment, the legal services and insurance industries, and zoning and land use. Includes additional topics such as new digital information products, international piracy, and intellectual property protections and created issues.

**CED 6120. Environmental Economics. (3 Hours)**

Analyzes efficient allocation of environmental resources and the impact on commerce and economic development. Includes additional topics such as the negative impact of economic activities on air and water with consideration of effective public policy. Explores current issues—such as global warming, habitat and species protection, etc.—and requires consideration of worldwide approaches and solutions to international problems.

**CED 6130. Sustainable Economic Development. (3 Hours)**

Addresses the economics of balancing development and environmental impacts in the context of meeting current and future human needs while protecting the environment. Considers challenges and strategies in both developed and developing economies. Beginning with the market failure resulting from not including environmental impacts in cost calculations, this course explores the competing models of economic development, the environment, and population growth.

**CED 6140. Economics of E-Commerce. (3 Hours)**

Uses theory and analysis of traditional industries to help understand the growth and future of electronic commerce. Includes relevant topics from industrial organization, including monopoly pricing, price discrimination, product differentiation, barriers to entry, network externalities, and search and first-mover advantages. Discusses a number of e-industries, including extensions and applications of the underlying economics, drawing analogies to previous technological revolutions, bubbles in asset markets, and the macroeconomic effects of the Internet.

**CED 6210. Managerial Finance. (3 Hours)**

Offers knowledge and tools to make informed investment and financing decisions. Topics include capital markets, advanced capital budgeting, decision making under uncertainty, asset pricing models, contingent claims models, capital structure, dividend policy, mergers, restructuring and corporate control, and exchange rate systems and international finance.

**CED 6220. International Finance. (3 Hours)**

Studies the international financial and monetary system, emphasizing currency markets. Examines market instruments and techniques, including synthetic and derivative securities and their application to management of currency risk in international trade and finance.

**CED 6230. Quantitative Methods. (3 Hours)**

Explores the development, testing, and application of multiple regression models in financial, economic, and business analysis and forecasting. Course material includes statistical concepts, probability concepts, probability distributions, sampling, hypothesis testing, time series analysis, and multifactor models. Topics are organized around the requirements of the "quantitative methods" portion of the CFA Level I exam.

**CED 6240. Financial Ethics. (3 Hours)**

Studies ethical problems in business and finance and lays the foundations for decisions involving ethical issues. Topics include ethical concepts, including personal integrity, financial industry ethical norms, and company loyalty and responsibility conflicts as they impact decision processes in the functional areas of finance. Organizes topics around the requirements of the ethics portion of the CFA Level I exam.

**CED 6250. Derivatives and Alternative Investments. (3 Hours)**

Introduces the mechanics of derivatives markets and types of available derivatives investments. Examines the fundamentals of the future markets, hedging strategies using futures, the market of SWAPs, and the mechanics of the options markets. Topics are organized around the requirements of the "derivatives" portion of the CFA Level I exam.

**CED 6910. Capstone: Master's Project. (4 Hours)**

Offers students, working in individuals and groups, an opportunity to design and carry out an interdisciplinary economic policy analysis comparable to those performed for a government or nonprofit agency. Projects can be done with real-world clients and utilize experience learned from co-op or experiential learning projects.

**Prerequisite(s):** CED 6030 with a minimum grade of C- ; CED 6040 with a minimum grade of C- ; CED 6050 with a minimum grade of C-

**CED 6983. Special Topics. (1-4 Hours)**

Covers special topics within the realm of Commerce and Economic Development.

**CED 6995. Project. (1-4 Hours)**

Focuses on an in-depth project in which a student conducts research or produces a product related to the student's major field. May be repeated without limit.