

# Economics (ECON)

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## **ECON 5020 [0.5 credit] (ECO 6122, ECO 6522)**

### **Microeconomic Theory**

An introduction to graduate-level microeconomic theory, including topics such as utility maximization and individual choice, decision-making under uncertainty, producer theory (technology, costs, and profit maximization), alternative market structures (competition, monopoly, and oligopoly), general equilibrium, and the economics of information.

Precludes additional credit for ECON 5000 (no longer offered) and ECON 5001 (no longer offered).

## **ECON 5021 [0.5 credit] (ECO 6120, ECO 6520)**

### **Macroeconomic Theory**

An introduction to graduate-level macroeconomic theory, including topics such as economic growth, consumption, investment, real and nominal frictions in the goods, labour, and credit markets, models of short-run economic fluctuations, and monetary and fiscal policy design.

Precludes additional credit for ECON 5002 (no longer offered).

## **ECON 5027 [0.5 credit] (ECO 5185, ECO 5585)**

### **Econometrics I**

An introduction to econometrics at the graduate level. Topics include the analysis and treatment of univariate and multivariate regression models, GLS, IV, and maximum likelihood estimation, hypothesis testing, seemingly unrelated regression models, and simultaneous equations models, together with relevant economic applications. Precludes additional credit for ECON 5005 (no longer offered).

## **ECON 5029 [0.5 credit]**

### **Methods of Economic Research**

Formulation, specification, and analysis of economic and econometric models; derivation of policy implications; communication of results and economic methodology. Precludes additional credit for ECON 5006 (no longer offered).

Prerequisite(s): ECON 5020 (ECON 5000 if taken before 2012-2013, ECON 5001 if taken before 2007-2008) and ECON 5027 (ECON 5005 if taken before 2012-2013), or permission of the Department.

## **ECON 5051 [0.5 credit]**

### **Asset Pricing**

Value, the dynamic optimization problems of firms and investors, risk-neutral pricing, and related topics.

## **ECON 5052 [0.5 credit]**

### **Financial Markets and Instruments**

Capital structure, debt financing, options, financial planning, corporate governance, and related topics.

## **ECON 5055 [0.5 credit]**

### **Financial Econometrics**

The econometrics of empirical finance including parametric and nonparametric models of volatility, evaluation of asset-pricing theories, and models for risk management and transactions data.

Prerequisite(s): ECON 5027 (or equivalent).

## **ECON 5058 [0.5 credit]**

### **Advanced Topics in Financial Economics**

Current research in financial economics. Topics may include theoretical analysis, quantitative methods, policy issues, and applications to the financial industry.

Prerequisite(s): ECON 5051 or ECON 5052, which may be taken concurrently with ECON 5058.

## **ECON 5209 [0.5 credit] (ECO 6106, ECO 6506)**

### **Selected Topics in the History of Economic Thought**

The development of economic thought through time in relation to selected economic problems.

Precludes additional credit for ECON 5201 (no longer offered) and ECON 5202 (no longer offered).

Also offered at the undergraduate level, with different requirements, as ECON 4209, for which additional credit is precluded.

## **ECON 5230 [0.5 credit]**

### **Economic History**

The application of economic theory and quantitative techniques to selected topics in economic history, which may include historical patterns of growth and welfare, nineteenth-century globalization, technological change, the development of agriculture, industrialization, the Great Depression, and the origins of central banks.

## **ECON 5301 [0.5 credit] (ECO 6140, ECO 6540)**

### **Industrial Organization I**

An examination of theories pertaining to industrial organization and their application by way of empirical studies. Topics include oligopoly theory, product differentiation, and strategic behaviour.

## **ECON 5303 [0.5 credit] (ECO 6142, ECO 6542)**

### **Industrial Organization II**

Regulation and competition policy as alternative approaches for influencing industry conduct and performance and correcting market failures. Topics may include incentive regulation under asymmetric information, cost-based pricing, second-best pricing, peak-load pricing, rate-of-return regulation, price-cap regulation, access pricing, and regulatory capture.

## **ECON 5304 [0.5 credit] (ECO 6135, ECO 6535)**

### **Topics in Industrial Organization**

Topics may include vertical restraints and vertical integration, innovation and research and development, network economics, contract theory, search theory and advertising, and industry studies.

**ECON 5309 [0.5 credit]****Applied Industrial Economics**

The application of industrial economics, with special emphasis on Canada and the rest of North America. Topics include the structure of consumer demand, firm production and investment, industrial structure and international trade, and the effect of government policies on industrial development.

**ECON 5361 [0.5 credit] (ECO 6191, ECO 6591)****Labour Economics I**

The application of microeconomic and macroeconomic theory to the labour market. Topics include labour supply and labour demand, wage determination, human capital, and the economics of education, and unemployment. Precludes additional credit for ECON 5360 (no longer offered) and ECON 5307 (no longer offered).

**ECON 5362 [0.5 credit] (ECO 6192, ECO 6592)****Labour Economics II**

Personnel economics and contract theory. Topics include the economics of unions, discrimination, the economics of the household, gender and fertility, and labour mobility.

**ECON 5363 [0.5 credit] (ECO 6193, ECO 6593)****Advanced Topics in Labour Economics**

Topics may include program evaluation, inequality, labour markets and health, labour markets and crime, and the structural estimation of labour market models. Precludes additional credit for ECON 5360 (no longer offered) and ECON 5307 (no longer offered).

**ECON 5401 [0.5 credit] (ECO 6130, ECO 6530)****Public Economics: Expenditures**

The theory of public expenditures. Topics may include public goods and externalities, social insurance and redistribution, public provision of health care and education, public pension systems, and unemployment insurance.

**ECON 5402 [0.5 credit] (ECO 6131, ECO 6531)****Public Economics: Taxation**

The study of tax systems. Concepts of equity and efficiency in taxation. The optimal design of tax structures using commodity, income, and capital taxes. Additional topics may include political economy of taxation, low-income support, environmental taxes, and tax evasion.

**ECON 5403 [0.5 credit] (ECO 6133, ECO 6533)****Topics in the Theory of Public Economics**

Topics may include political economy, tax incidence in general equilibrium, the theory and practice of tax reform, normative approaches to income redistribution, the theory of non-market decision-making, the non-profit sector, and social choice theory.

**ECON 5404 [0.5 credit]****Fiscal Federalism**

Economic aspects of federalism, including efficiency, redistribution, consideration of a federal system of government, intergovernmental grants, and problems of stabilization policy in a federal context.

**ECON 5407 [0.5 credit]****Cost-Benefit Analysis and Project Evaluation**

Techniques and problems in cost-benefit analysis and the evaluation of public and private projects. Topics may include surplus measurement, investment decision rules, shadow pricing, the valuation of non-marketed goods, distributive weights, and the evaluation of projects involving uncertainty, loss of life, and/or population change.

**ECON 5460 [0.5 credit] (ECO 6174, ECO 6574)****Health Economics**

Review of both classic and frontier work in the field of health and health care economics. Empirical work with an emphasis on theory and methodology. This course is also relevant to students interested in broader empirical microeconomic research.

**ECON 5500 [0.5 credit] (ECO 6170, ECO 6570)****Theory of Economic Development**

Theoretical approaches of the economic development literature in relation to the historical, economic, environmental, social, and political dimensions of the development process.

**ECON 5504 [0.5 credit] (ECO 6171, ECO 6571)****Economic Development: Domestic Aspects**

Major domestic problems of economic development. Topics may include employment, income distribution, choice of technology, sectoral allocation of resources, human resource development, and domestic environmental issues.

**ECON 5505 [0.5 credit] (ECO 6172, ECO 6572)****Economic Development: International Aspects**

Key problems of international economic development such as trade in primary commodities and manufactures, financial flows and debt, the role of multinational corporations, the transfer of technology, and the international dimensions of environmental issues as they relate to developing countries.

**ECON 5507 [0.5 credit] (ECO 6173, ECO 6573)****Environmental Aspects of Economic Development**

Policy aspects of sustainable economic development and environmental quality in developing countries. Topics may include energy use, deforestation, drought and desertification, depletion of natural resources, debt, environment and poverty, sustainable industrial and agricultural development, conservation policies, pollution control, and global environmental issues.

**ECON 5601 [0.5 credit] (ECO 6160, ECO 6560)****International Trade: Theory and Policy**

International trade theory and its implications for economic policy, with emphasis on topics such as determinants of trade and specialization, gains from trade and commercial policy, international factor mobility, growth, and development.

**ECON 5602 [0.5 credit] (ECO 6161, ECO 6561)****International Monetary Theory and Policy**

International monetary theory and its implications for economic policy, with emphasis on topics such as sources of equilibrium and disequilibrium in the balance of payments, balance-of-payments adjustment under fixed versus flexible exchange rates, international capital movements, and recent issues in the international monetary system.

**ECON 5603 [0.5 credit] (ECO 6162, ECO 6562)****Topics in International Economics**

Selected topics in international economics, including theoretical analysis, quantitative methods, and policy formulation, implementation, and evaluation.

**ECON 5606 [0.5 credit] (ECO 6180, ECO 6580)****Foundations of Monetary Economics**

Microeconomic foundations of monetary theory. Alternative theories of the existence of money and the micro-foundations for how money is integrated into aggregate macroeconomic models.

**ECON 5607 [0.5 credit] (ECO 6181, ECO 6581)****Topics in Monetary Economics**

Coverage of one or more areas of current research on the frontiers of monetary economics.

**ECON 5608 [0.5 credit] (ECO 6182, ECO 6582)****Monetary Economics and Financial Intermediation**

The evolution of the financial system and its interrelationship with the money supply process. Monetary and finance theory and empirical research applied to institutional problems in both historical and contemporary settings. Topics may include credit markets, financial instability, bubbles, and links to central bank policy.

**ECON 5609 [0.5 credit] (ECO 6183, ECO 6583)****Explorations in Monetary Economics**

Explorations in theory, policy recommendations, and empirical study. Course material challenges traditional approaches by examining such topics as the endogeneity of money, the role of credit, financial instability, the circuit approach, flow-of-funds analysis, sectoral stock-flow coherence, and functional finance.

**ECON 5700 [0.5 credit]****Social and Economic Measurement**

Index number theory and national accounting. Topics may include: biases in indexes, inflation accounting, the theory of international comparisons, and the measurement of business and personal income, capital and depreciation, and productivity.

**ECON 5712 [0.5 credit] (ECO 6175, ECO 6575)****Micro-Econometrics**

Analysis of the concepts and tools used in micro-econometrics with particular focus on empirical applicability. Topics may include discrete choice models, limited dependent variables, panel data, duration models, and program evaluation, together with relevant economic applications.

Precludes additional credit for ECON 5702 (no longer offered).

Prerequisite(s): ECON 5027 (or equivalent).

**ECON 5713 [0.5 credit] (ECO 6176, ECO 6576)****Time-Series Econometrics**

Analysis of the concepts and tools used in time-series econometrics with particular focus on empirical applicability. Topics may include cointegration analysis, error-correction models, VAR models, volatility analysis, and non-linear time-series models, together with relevant economic applications.

Precludes additional credit for ECON 5703 (no longer offered).

Prerequisite(s): ECON 5027 (or equivalent).

**ECON 5801 [0.5 credit]****Regional Economics**

Regional economic disparities in Canada, theories and public policy relating thereto. Consideration will be given to the concept of regions, location of industry and industrial structure, and to growth determinants.

**ECON 5802 [0.5 credit]****Urban Economics**

The economic properties of urban areas. Attention will be focused on the macrodynamics of urban development, together with the microstatics of the equilibrium properties of the urban land market.

**ECON 5803 [0.5 credit] (ECO 6143, ECO 6543)****Economics of Natural Resources**

The concept of scarcity rents in static and dynamic settings. Basic property regimes: open access, exclusive access and common property. Policy instruments. The importance of transaction costs. General-equilibrium and political-economic aspects of property regimes. Conflict. Elements of dynamic optimization. Renewable and non-renewable resources.

Precludes additional credit for ECON 5305 (no longer offered).

**ECON 5804 [0.5 credit] (ECO 6151, ECO 6551)****Economics of the Environment**

Theory of environmental regulation, including command and control, incentive based mechanisms, effects of market structure, and interactions with pre-existing taxes. Valuation of non-marketed goods, including existence value, contingent valuation, hedonic price methods, health impacts, irreversibility, and recreational benefits.

Precludes additional credit for ECON 5306 (no longer offered).

**ECON 5805 [0.5 credit] (ECO 6134, ECO 6534)****Topics in Environmental and Resource Economics**

Topics may include: international dimensions of environmental regulation, including treaties, competitiveness, and the effects of trade liberalization; development issues, including fiscal sustainability, Dutch disease, the resource curse, and population growth; resource topics, including optimal taxation, green national accounts, sustainability theory, and scarcity of extractive resources.

**ECON 5821 [0.5 credit]****Canadian Economy I**

Aspects and problems of the Canadian economy. Topics may include the economic development of Canada, regional development, industrial organization, factor markets, income distribution, international trade and capital flows, and macroeconomic stability.

Precludes additional credit for ECON 5101 (no longer offered).

**ECON 5822 [0.5 credit]****Canadian Economy II**

Economic theory applied to the workings of the Canadian economy. Empirical estimation of various aspects of factor market operation, production, distribution, and aggregate economy.

Precludes additional credit for ECON 5102 (no longer offered).

**ECON 5840 [0.5 credit]****Law and Economics**

The interrelationships between law and economics, emphasizing transaction costs and property rights. Economic analysis of such topics as the allocative effects of alternative property rights, contract, tort, and nuisance law, and the economics of crime, pollution, pay television, and eminent domain.

Precludes additional credit for ECON 5308 (no longer offered).

**ECON 5880 [0.5 credit]****Special Topics**

Topics may vary from year to year and are announced in advance of the registration period.

Prerequisite(s): permission of the Department.

**ECON 5902 [0.5 credit]****Internship Placement**

Internship students are required to register in this course during their work term.

Prerequisite(s): permission of the Department.

**ECON 5906 [0.5 credit]****Directed Research**

A substantial research paper is required of any student enrolled in this course, which is designed to facilitate the pursuit of research on a topic chosen in consultation with a faculty member and the relevant Graduate Supervisor.

Prerequisite(s): permission of the Department.

**ECON 5909 [1.5 credit]****M.A. Thesis****ECON 6019 [0.5 credit] (ECO 7119)****Mathematical Foundations for Economic Theory**

Mathematical techniques needed to understand micro- and macro-economic theory at the Ph.D. level, and to carry out research. Real analysis. Review of static optimization. Continuous- and discrete-time dynamic optimization in deterministic and stochastic environments. Applications to economic theory are presented.

Prerequisite(s): ECON 5020 (or equivalent) and ECON 5021 (or equivalent), or permission of the Department.

**ECON 6020 [0.5 credit] (ECO 7922)****Economic Theory: Microeconomics**

Advanced graduate-level microeconomic theory, including topics such as game theory, externalities and public goods, general equilibrium, and welfare.

Precludes additional credit for ECON 6000 (no longer offered).

Prerequisite(s): ECON 5020 (or equivalent) and ECON 6019.

**ECON 6021 [0.5 credit] (ECO 7923)****Economic Theory: Macroeconomics**

Advanced graduate-level macroeconomic theory with particular focus on dynamic general equilibrium models. Exposition of the main theoretical concepts and exploration of the basic structure underlying these models. Application to the study of household consumption decisions, firm investment decisions, and economic growth.

Precludes additional credit for ECON 6001 (no longer offered) and ECON 6002 (no longer offered).

Prerequisite(s): ECON 5021 (or equivalent) and ECON 6019.

**ECON 6027 [0.5 credit] (ECO 7126, ECO 7526)****Econometrics II**

Statistical foundations of econometrics: estimation, inference, and decision theory. Topics may include likelihood and moment-based inference, asymptotic theory, semi-parametric and non-parametric models, Bayesian approaches, and structural models, together with relevant economic applications.

Precludes additional credit for ECON 5701 (no longer offered) and ECON 6005 (no longer offered).

Prerequisite(s): ECON 5027 (or equivalent).

**ECON 6714 [0.5 credit] (ECO 7177, ECO 7577)****Advanced Topics in Econometrics**

Coverage of one or more areas of current econometric research.

Prerequisite(s): ECON 6027 (ECON 6005 if taken before 2012-2013).

**ECON 6900 [0.5 credit] (ECO 7990)****Comprehensive Examination in Microeconomic Theory**

**ECON 6902 [0.5 credit] (ECO 7991)**  
**Comprehensive Examination in Macroeconomic Theory**

**ECON 6903 [0.0 credit]**  
**Seminar Attendance**

**ECON 6904 [0.5 credit] (ECO 7980)**  
**Directed Readings**

This course is designed to permit students to pursue research on topics chosen in consultation with faculty members and the Ph.D. Supervisor.  
Prerequisite(s): permission of the Department.

**ECON 6905 [0.5 credit] (ECO 9990)**  
**Comprehensive Examination in Primary Field**

**ECON 6907 [0.5 credit] (ECO 7002)**  
**Thesis Workshop I**

**ECON 6908 [0.5 credit] (ECO 7004)**  
**Thesis Workshop II**

**ECON 6909 [5.0 credits] (ECO 9999)**  
**Ph.D. Thesis**

**Summer session:** some of the courses listed in this Calendar are offered during the summer. Hours and scheduling for summer session courses will differ significantly from those reported in the fall/winter Calendar. To determine the scheduling and hours for summer session classes, consult the class schedule at [central.carleton.ca](http://central.carleton.ca)

Not all courses listed are offered in a given year. For an up-to-date statement of course offerings for the current session and to determine the term of offering, consult the class schedule at [central.carleton.ca](http://central.carleton.ca)