Ryerson University Graduate Studies

Economics

Curriculum

Degree Requirements: Master of Arts – International Economics and Finance

	Master's Research Paper	(Milestone)
EF8100	Mathematics and Statistics Review	(Non-credit)
EF8901	Microeconomics	1
EF8902	Macroeconomics	1
EF8903	Applied Econometrics	1
EF8904	Financial Theory	1
	Two elective courses (or 1 if both Fields chosen)	1 or 2
	One (or both) of the following Fields:	
	Field I - International Finance	
EF8911	International Finance	1
	Field II - International Trade & Policy	
EF8931	Int'l Trade Theory, Policy	1

Electives (2, or 1 if both fields chosen)

Course code	Course title	Credits
EF8912	Country Risk Analysis	1
EF8913	Empirical Topics in International Finance	1
EF8914	Financial Econometrics	1
EF8915	Int'l Corporate Finance	1
EF8932	Int'l Trade-Imperfect Comp	1
EF8933	Empirical Topics Int'l Trade	1

EF8934	Global Inst and Int'l Economy	1
EF8935	Law/Reg-Int'l Trade and Invest	1
EF8936	International Public Economics	1
EF8937	Labour Economics	1
EF8938	Development Microeconomics	1
EF8939	Topics in Econometrics	1
EF8940	Environment Economics	1
EF8941	Topics in Dev Economics	1
EF8942	Industrial Organization	1
EF8943	Monetary Economics	1
EF8944	Panel Data and NL Model Analysis	1
EF8945	Nonparametric Data Analysis	1

Degree Requirements: Doctor of Philosophy – Economics (First Offered Fall 2010)

	PhD Comprehensive Examination	(Milestone)
	PhD Dissertation	(Milestone)
EF9100	PhD Seminar	(Non-credit)
EF8100	Mathematics and Statistics Review	(Non-credit)
	Core Courses: Compulsory	
EF9901	Advanced Microeconomics I	1
EF9902	Advanced Macroeconomics I	1
EF9903	Advanced Econometrics I	1
EF9904	Mathematical Economics	1
EF9921	Advanced Microeconomics II	1
EF9922	Advanced Macroeconomics II	1
EF9923	Advanced Econometrics II	1

7 Elective Courses

	Group A (Choose minimum of 5)	Credits
EF9905	Advanced Topics in Int'l Trade I	1
EF9906	International Finance	1
EF9907	Game Theory	1
EF9908	Advanced Topics in Macro and Finance	1
EF9909	Numerical Methods in Economics	1
EF9910	Advanced Topics in Int'l Trade II	1
EF9911	Advanced Topics in Labour Economics	1
EF9912	Directed Studies in Economics	1
	Group B	
EF8913	Empirical Topics in International Finance	1
EF8914	Financial Econometrics	1
EF8932	International Trade-Imperfect Comp	1
EF8933	Empirical Topics Int'l Trade	1
EF8935	Law/Reg-Int'l Trade and Invest	1
EF8936	International Public Economics	1
EF8937	Labour Economics	1
EF8938	Development Microeconomics	1
EF8939	Topics in Econometrics	1
EF8940	Environment Economics	1
EF8941	Topics in Dev Economics	1
EF8942	Industrial Organization	1
EF8943	Monetary Economics	1

EF8944	Panel Data and NL Model Analysis	1
EF8945	Nonparametric Data Analysis	1
AM8001	Analysis and Probability	1
AM8201	Financial Mathematics	1

*Note: Up to 2 credits may be given for coursework at the Master's level.

Course listing

Master's Research Paper
The student is required to complete a research paper on a topic related to his/her field of specialization (international trade or international finance). The research topic is selected in consultation with the student's supervisor, where the student presents an outline of the research plan in writing, and the research is carried out under the direction of a faculty supervisor and monitored by a supervisory committee. On completion, the research results are submitted in research paper format to the supervisor and a second reader, who assess and grade the research paper. Through the research paper, the student is expected to provide evidence of competence in carrying out research and a sound understanding of the material associated with the research. This is a "Milestone." Pass/Fail

PhD Comprehensive Examination
The comprehensive examinations will consist of two exams in microeconomic theory and macroeconomic theory, and one field exam. The theory exams should be completed successfully within two years of registration into the PhD program. The field exam must be completed in the third year of study. This is a Milestone. Pass/Fail

PhD Dissertation
Preliminary research to develop a dissertation topic normally begins in the second year of study. A dissertation proposal must receive the approval of the Faculty Advisor and members of the Dissertation Supervisory Committee in the third year of study before the end of the Winter term.
To complete the PhD degree, a student's dissertation that contains original and significant research must receive final approval of a Dissertation Examining Committee, as described by the official policies of the SGS. The dissertation must be presented and defended at a public colloquium convened by the Dissertation Supervisor for that purpose. This defence must be announced at least three weeks in advance with copies of the dissertation available for faculty and graduate students at least one week before the defence. This is a Milestone. Pass/Fail

EF8100 Mathematics and Statistics Review
All students who have been admitted into a Graduate Economics (MA, PhD) program must demonstrate competence in quantitative methods by passing a preliminary course in mathematical economics. Course material will be provided both in class and on the web during the last two weeks of August. Attendance is highly recommended but not compulsory. This is a pass/fail, non-credit course for which there will be an exam before the official start of the Fall term. Students who fail the first attempt must rewrite the exam by October 31st of that year. Non-attendance to the final exam is also counted as a Fail. If the student fails the second attempt or is unable to rewrite the exam by October 31st, the mark from their first attempt (Fail) will be considered their final grade, and they will be asked to withdraw from the program. Non-credit. Pass/Fail

EF8901 Microeconomics
This course provides in depth coverage of the foundations of microeconomic theory required for effective analysis of international economic issues. Fundamentals such as static and dynamic optimization, consumer choice (deterministic and under uncertainty), and producer theory (profit maximization, costs, and duality) will be supplemented with applications to market structure, game theory in trade and policy, the economics of information, and general equilibrium. Examples and illustrations will be drawn from an international context throughout the course. 3 lecture hours + 1 tutorial hour/week. 1 Credit

EF8902 Macroeconomics
This course is an introduction to graduate macroeconomics and the techniques associated with analyzing macroeconomic models. Topics include theories of aggregate supply, rational expectations, inflation and monetary policy, growth theories, consumption and savings, open economy macroeconomics and empirical methods suitable for studying international linkages of exchange rates, interest rates and prices. The technical tools include standard calculus, linear algebra, optimization in continuous time using the Hamiltonian, optimization in discrete time using dynamic programming, and methods in time series analysis. 3 lecture hours + 1 tutorial hour/week. 1 Credit

EF8903 Applied Econometrics
This is an introduction to estimation and inference in econometrics, in the context of the linear regression model. Estimation methods include Ordinary Least Squares (OLS), Generalized Least Squares (GLS), Instrumental Variables (IV) and Maximum Likelihood (ML). Inference will be based on test statistics from unrestricted and restricted parameter estimates. Theoretical and applied aspects of the course will be considered. Required knowledge: econometrics software packages such as TSP, EVIEWS, SAS, or STATA. 3 lecture hours + 1 tutorial hour/week. 1 Credit

EF8904 Financial Theory
This course is designed to provide graduate students with a broad overview of Finance as an academic discipline. The course covers optimal portfolio decision-making, financial instrument valuation (stocks, bonds and derivative securities), and the basic elements of corporate finance. Specifically, we will consider CAPM, arbitrage pricing theory, CCAPM, martingale pricing theory, and basic derivative pricing theory. There will also be a brief introduction to asset pricing in markets with frictions.
Antirequisite AM8201. 3 lecture hours + 1 tutorial hour/week. 1 Credit

EF8911 International Finance
This course examines theoretical and empirical issues regarding international macroeconomics. Topics include the determinants of the international balance of payments, theories of foreign exchange rate determination, fixed versus flexible exchange rate regimes and the efficacy of monetary and fiscal policies under such regimes. 3 lecture hours + 1 tutorial hour/week. 1 Credit

EF8912 Country Risk Analysis
This course introduces the students to the theory and practice of managing cross-border lending and international investment risk. The course gives a comprehensive coverage of the analysis and reporting of sovereign creditworthiness, political risk, current account analysis, statistical credit-scoring methodologies, loan valuation, portfolio management and regulatory supervision. Several case studies will be used, including the Mexican Peso crisis and the collapse of the markets in South East Asia.
Antirequisite: ECN 821. 1 Credit

EF8913 Empirical Topics in International Finance
The objective of this course is to develop a solid understanding of international financial markets and examine managerial decision making in an international setting. International financial markets will be studies in the context of the foreign exchange, offshore, derivative securities, and international asset portfolio markets. Theoretical and empirical aspects of these markets will be analyzed in detail. Decision making regarding the measurement and management of risk in international markets will be analyzed from the point of view of individuals and firms.
Prerequisite EF8903 or equivalent, or instructor permission. 1 Credit

EF8914 Financial Econometrics
The purpose of this course is an introduction to the theory and econometric techniques that are necessary to undertake empirical analysis of financial time series. Topics include univariate linear and nonlinear stochastic models such as ARMA processes, ARIMA processes, ARCH-GARCH processes, martingales and random walks. Multivariate stationary and non-stationary processes will also be examined in the context of Vector Autoregressive (VAR) models and Vector Error Correction Models (VECM) for integrated processes. Empirical application of these techniques will be done using data from the Canadian and/or international financial markets. Students of this course are expected to have a solid background in econometrics and have working knowledge of an econometrics package such as EVIEWS, TSP, Stata or SAS. Prerequisite: EF8903 or equivalent, or instructor permission. 1 Credit

EF8915 Int'l Corporate Finance
The purpose of this course is for students to understand the dynamics of international corporate finance by concentrating on the financing and investment policies of multinational corporations. We will examine how to evaluate international projects which require large investments and calculate the cost of capital. We will investigate the costs and benefits of issuing securities on international markets. Other topics include international portfolio diversification, taxation issues and functions of offshore centres. This course offers an in-depth treatment of the Classical, neoclassical, and contemporary theories of international trade. Topics include commercial policy, income distribution, international factor movements, and growth. The course also examines various trade policies and their impact on welfare. 1 Credit

EF8931 Int'l Trade Theory, Policy
This course offers an in-depth treatment of the Classical, neoclassical, and contemporary theories of international trade. Topics include commercial policy, income distribution, international factor movements, and growth. The course also examines various trade policies and their impact on welfare. Prerequisite: EF8901. 3 lecture hours + 1 tutorial hour/week. 1 Credit

EF8932 Int'l Trade - Imperfect Comp
This course will provide students with a firm grasp of theoretical and empirical methods of analyzing international trade outside of the traditional competitive framework, utilizing the tools of New Trade Theory. Topics addressed include multinational corporations, strategic interaction between governments and firms, intra-industry trade, intellectual property rights and the emergence of international technology gaps. Prerequisite: EF8901. 1 Credit

EF8933 Empirical Topics Int'l Trade
This course examines the pattern of trade and the welfare consequences of various trade policies from an empirical view point and teaches the students how to apply trade analysis in a policy environment. The use of the gravity equation will be examined as well as other methods of analyzing trade flows and impediments to trade such as tariffs and transportation costs. The course will emphasize the difficulties in obtaining data and deciding on the appropriate estimation method. Prerequisite: EF8901. 1 Credit

EF8934 Global Inst and Int'l Economy
This course is divided into two parts. The first part investigates various explanations of why institutions exist and examines the challenges of creating international institutions that enforce agreed upon rules governing economic relations among nations. The second part of the course looks at the structure of existing international institutions, such as the IMF, the World Bank and the WTO. Case studies will be presented to analyze the impact of policies of these institutions on the national economies. Instructor permission required. Prerequisite: EF8901. 1 Credit

EF8935 Law/Reg – Int'l Trade and Invest
This course introduces the student to the law and regulation of international trade and investment. The course will begin with an introduction and overview of the history and characteristics of the WTO trading system. The similarity and differences to NAFTA will be reviewed. Students will then examine the regulation of trade in goods and services, as well as current international regulatory issues relating to the environment, labour, immigration, culture and ethics. Government procurement and intellectual property rules will be examined. International investment rules and dispute settlement will be studied as well as international competition policy and its relationship to AD and CVD rules. The course will conclude with an examination of the dispute settlement regimes of NAFTA and the WTO. Prerequisite: EF8901. 1 Credit

EF8936 International Public Economics
Globalization and the ongoing integration of world markets have serious implications for the nature and impact of domestic fiscal policies. The design of taxation policies in modern economies requires that policymakers carefully consider the international ramifications of their decisions. This course examines some important issues in international taxation. Topics to be covered include the effects of fiscal policy in an open economy relative to a closed economy, optimal income taxation in an open economy, taxes and portfolio choice, tax harmonization and tax coordination, and the impact of taxation on the activities of multinational corporations. Prerequisite: EF8901 or equivalent, EF8902 or equivalent, or instructor permission. 1 Credit

EF8937 Labour Economics
This course examines theoretical and empirical issues regarding international labour economics. While goods and capital markets across countries are integrating rapidly, labour markets are integrating at a much slower pace,

especially between developing and developed countries. Nevertheless labour markets are deeply affected by the integration in the other markets. The relationship between labour markets dynamics and the integration in capital and goods markets will be the focus of the course. Topics to be covered include regional labour market differences, the interaction between international trade, capital flows and labor markets, the importance of human capital formation for development, and international migration. 1 Credit

EF8938 Development Microeconomics
The purpose of this course is to provide a microeconomic analysis to some important issues of the current global economy. The topics we intend to cover are taken from a broad spectrum, ranging from current industry practices (e.g., outsourcing) to institutions in developing countries (e.g., Grameen Bank-a highly successful rural micro-credit program in Bangladesh).1 The approach will be of a theoretical nature, applying tools of general microeconomic theory to some of the major issues of the international economy. Although we shall often provide illustrations using case studies, the emphasis will be on microeconomic analysis rather than descriptive accounts. As the course will discuss the micro-foundations of institutions as well as industry practices that have important trade policy implications, it will complement the existing courses on institutions and trade (e.g., International Trade under Imperfect Competition, Global Institutions and the International Economy). 1 Credit

EF8939 Topics in Econometrics
This course provides an introduction to nonparametric methods used in econometrics. Nonparametric methods are statistical techniques which do not require the researchers to specify a functional form for the function being estimated (e.g. probability density function, regression function, etc.). The primary goal of the course is to enable students to intelligently apply these methods in analyzing real-world economic issues. Prerequisite EF8903 or equivalent or instructor permission.1 Credit

EF8940 Environment Economics
An evaluation of the theory and practice of economic sources of environmental problems and environmental policy, including emissions taxes, standards and permits. Analysis of approaches to address topics such as regional air pollution, global climate change, water allocation, and the use of renewable resources, and the relationship between the environment and population growth, income, international trade and economic development. 1 Credit

EF8941 Topics in Dev Economics
A survey of empirical methods in development microeconomics. The course examines different methodologies used to measure the effectiveness of development policies. Topics include analysis of randomized controlled trials, quasi-experimental methods, survey methodology, and poverty measurement. 1 Credit

EF8942 Industrial Organization
Industrial Organization is the formal study of firm behavior under imperfect competition. The objective of this course is to provide a rigorous understanding of certain core theoretical aspects of the behavior of firms and industries in imperfectly competitive markets. The main emphasis of the course will be upon oligopoly theory. The course will cover issues such as oligopoly pricing, price discrimination, location strategies, product differentiation, structure of firms and mergers, entry deterrence, advertising and the economics of research and development. Prerequisite**:** EF8901 or instructor permission. 1 Credit

EF8943 Monetary Economics
The goal is to study theoretical frameworks that can help us make sense of recent financial market developments and to see what these theories suggest in the way of appropriate interventions in (and following) a financial market crisis. We begin by reviewing the foundations of monetary exchange and the role of banks as suppliers of liquidity. Discussions may also include: role of central banks, the emergence of "shadow banking", and special properties of exchange media. 1 Credit

EF8944 Panel Data and NL Model Analysis
The first part of this course covers panel data models: static panel data models and dynamic panel data models. The second part deals with limited-dependent variable models in the cross-sectional setting such as discrete choice models, censored and truncated regression models and sample selection models. 1 Credit

EF8945 Nonparametric Data Analysis
This course provides an introduction to nonparametric methods used in econometrics. Nonparametric methods are statistical techniques which do not require the researcher to specify a particular form for the function being estimated (e.g., probability density function, regression function, etc.). The primary goal of the course is to enable students to intelligently apply these methods in analyzing real-world economic data. 1 Credit

EF9100: Economics PhD Seminar
Students devote their third and fourth years of study to developing and refining their dissertation research. The objective of the PhD seminar series is to prepare students for writing their PhD dissertations by providing opportunities for PhD candidates to present their research to other students and faculty. Every year, PhD candidates in third year and above must present their ongoing research. Attendance in the PhD seminar course and the regular departmental seminar series are mandatory for all PhD students in second year and above. Pass/Fail

EF9901 Advanced Microeconomics I
The goal of the Advanced Microeconomics I and II sequence is to provide a firm microeconomic foundation, and the necessary toolkit, for advanced doctoral study in economics. We will analyze consumer theory, producer theory, decision theory, game theory, the economics of information, the general equilibrium theory. We will learn how to use these tools correctly when applying economic analysis to the real world. This is the first course of the sequence. 3 lecture hours + 1 tutorial hour/week. 1 Credit

EF9902 Advanced Macroeconomics I
The objective of this course is to introduce students to modern macroeconomic theory. The course formally analyzes the basic models used in modern macroeconomics theory and their applications to the study of various economic issues. Topics covered include recursive methods, asset pricing, search frictions, and the labour market. Student will learn to use MATLAB software in order to numerically solve some of the models introduced in the course. 3 lecture hours + 1 tutorial hour/week. 1 Credit

EF9903 Advanced Econometrics I
This course is composed of two parts. The first half of this class is to be an introduction to probability and statistical theory. The second half of this class is to be an introduction to the econometrics at graduate level. Prerequisite: EF9904 3 lecture hours + 1 tutorial hour/week. 1 Credit

EF9904 Mathematical Economics
The field of economics has become more technical over the years. Macroeconomic models often involve the solution of complex dynamic optimization problems. In microeconomics, the relaxation of the assumptions of perfect information and complete markets requires the use of advanced mathematical tools that are usually not familiar to students entering the field. The objective of this course is to provide the students with the technical tools and concepts that they will use in their graduate economic courses. Topics include: linear algebra, set and measure theory, convex analysis, and optimization and fixed point theory. A significant part of the course is devoted to economic applications that illustrate how the concepts and techniques are used in the different areas of economics. These applications are designed for the students to recognize the link between mathematical and economic theory. 3 lecture hours + 1 tutorial hour/week. 1 Credit

EF9905 Advanced Topics in Int'l Trade I
Traditional theories of comparative advantage are generalized to include alternative sources, and higher dimensional issues. Imperfect competition, external economies, alternative preference representations, asymmetric information, offshoring and outsourcing are introduced into international trade models. Analysis of the gains from trade in different frameworks and the effects of trade on income distribution. The role of international trade and tax policy. Analysis of the design and structure of trade agreements and tax treaties. Prerequisite: EF9901 and EF9921. 1 Credit

EF9906 Theory and Methods in International Finance
The objective of this course is to examine the theoretical and empirical connections between national asset markets. This course covers topics in open-economy macroeconomics and international finance. Topics may include dynamic stochastic general equilibrium models, small open economy models, international business cycles, international financial markets and capital flows, asset pricing puzzles, risk-sharing puzzles and exchange rate implications of macroeconomic models. Prerequisite: EF9902 and EF9922. 1Credit

EF9907 Game Theory
This course offers students a rigorous introduction to game theory, together with some of its applications to various strategic aspects in economics. Important concepts covered in this course include: strategic-form and extensive-form games, refinements of Nash equilibrium, epistemic foundations, repeated games, bargaining, voting, auctions and mechanism design. We also illustrate how programming. The MATLAB software package will be used to illustrate the various techniques and for completing the assignments in the course. Prerequisite: EF9904 Mathematical Economics. 1 Credit

EF9908 Advanced Topics in Macro and Finance
This course is an introduction to modern asset pricing theories and applications. It examines asset pricing theories from the perspectives of stochastic dynamic macroeconomic models and recent developments in the theory of finance. Topics to be covered include the pricing of stocks, bonds, options, portfolio theory, the term structure of interest rates, real investments and heterogeneous agent models. The empirical aspects of asset pricing theories will be examined using modern financial econometric techniques such as the generalized method of moments (GMM). Prerequisite: EF9902 and EF9922. 1 Credit

EF9909 Numerical Methods in Economics
Economic models have become increasingly sophisticated in order to better capture the inherent complexities of real-world behaviour. The majority of these models however cannot be solved analytically using the standard mathematical tools of calculus and algebra. For this reason economists frequently need to resort to numerical methods. The objective of this course is to introduce students to various computational techniques and their application to economic analysis. Topics to be covered include solution of linear and nonlinear systems of equations, optimization, numerical integration and differentiation, and numerical dynamic programming. The MATLAB software package will be used to illustrate the various techniques and for completing the assignments in the course. Prerequisite: EF9904 Mathematical Economics. 1 Credit

EF9910 Advanced Topics in Int'l Trade II
A continuation of the topics in EF 9905. Prerequisite: EF9901 and EF9921. 1 Credit

EF9911 Advanced Topics in Labour Economics
The purpose of this course is to familiarize graduate students with empirical techniques and theoretical ideas which are currently widely used in labour economics. Topics include neoclassical analysis of the labour market and its institutions; a systematic development of the theory of labour supply, labour demand, and human capital theory; theories of wage and employment determination, turnover, search, unemployment, equalizing differences, and union behaviour, with particular emphasis on the interaction of theoretical and empirical modeling. Prerequisite: EF9901, EF9903 and EF9921. 1 Credit

EF9912 Directed Studies in Economics
This course is for students who wish to gain knowledge in a specific area for which no graduate level classes are available. Students who are approved to take the course are assigned a suitable class advisor most familiar with the proposed content. Students are required to present the work of one term (not less than 90 hours in the form of directed research, tutorials and individual study) in an organized format. 1 Credit

EF9921 Advanced Microeconomics II
he goal of the Advanced Microeconomics I and II sequence is to provide a firm microeconomic foundation, and the necessary toolkit, for advances doctoral studies in Economics. We will analyze consumer theory, producer theory, decision theory, game theory, the economics of information, and general equilibrium theory. We will learn how to use these tools correctly when applying economic analysis to the real works. This is the second course in the sequence. Prerequisite: EF9901. 3 lecture hours + 1 tutorial hour/week. 1 Credit

EF9922 Advanced Macroeconomics II
The objective of this course is to familiarize the students with the analytical techniques of dynamic macroeconomics theory and its application to the study of several macroeconomic issues. Topics covered include dynamic programming for deterministic and stochastic economics, growth theory, monetary and fiscal policy, Bewley models and the determination of wealth and income distributions, and incomplete markets theory. Students will learn

numerical techniques and use MATLAB software. Prerequisite: EF9902. 3 lecture hours + 1 tutorial hour/week. 1 Credit

EF9923 Advanced Econometrics II
This course is intending for PhD students in Economics and extends the material covered in EF 8903: Econometrics I. Topics covered include instrumental variable estimation, generalized method of moments, binary response models, panel data models, time series models and quantile regression. Prerequisite: EF9903. 3 lecture hours + 1 tutorial hour/week. 1 Credit