

## **REGULATIONS FOR THE DEGREE OF MASTER OF ECONOMICS (MEcon)**

*These Regulations apply to candidates admitted to the Master of Economics curriculum in the academic year 2021-22 and thereafter.*

*(See also General Regulations and Regulations for Taught Postgraduate Curricula)*

Any publication based on work approved for a higher degree should contain a reference to the effect that the work was submitted to The University of Hong Kong for the award of the degree.

The degree of Master of Economics is a postgraduate degree awarded for the satisfactory completion of a prescribed course of study in economics with emphasis on the analysis of real world economic problems.

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### **Admission requirements**

**ME 1.** To be eligible for admission to the courses leading to the degree of Master of Economics, candidates shall

- (a) comply with the General Regulations;
- (b) comply with the Regulations for Taught Postgraduate Curricula;
- (c) hold
  - (i) a Bachelor's degree with honours of this University; *or*
  - (ii) another qualification of equivalent standard from this University or from another University or comparable institution accepted for this purpose; and
- (d) satisfy the examiners in a qualifying examination, if required.

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### **Qualifying examination**

**ME 2.**

- (a) A qualifying examination may be set to test the candidates' formal academic ability or their ability to follow the courses of study prescribed. It shall consist of one or more written papers or their equivalent, and may include a project report.
- (b) Candidates who are required to satisfy the examiners in a qualifying examination shall not be permitted to register until they have satisfied the examiners in the examination.

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### **Award of degree**

**ME 3.** To be eligible for the award of the degree of Master of Economics, candidates shall

- (a) comply with the General Regulations;
- (b) comply with the Regulations for Taught Postgraduate Curricula; and
- (c) complete the curriculum and satisfy the examiners in accordance with the regulations set out below.

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### **Period of study**

**ME 4.** The curriculum shall normally extend over one academic year of full-time study. Candidates shall not be permitted to extend their studies beyond the maximum period of registration of two academic years, unless otherwise permitted or required by the Board of the Faculty.

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## **Completion of curriculum**

- ME 5.** To complete the curriculum, candidates shall
- (a) satisfy the requirements prescribed in TPG 6 of the Regulations for Taught Postgraduate Curricula;
  - (b) follow the courses of instruction and complete satisfactorily all prescribed written work and field work;
  - (c) satisfy the examiners in all prescribed courses as specified in the syllabuses and in any prescribed form of examination;
  - (d) if appropriate, complete and present a satisfactory project paper in lieu of one written paper in the examination, or complete and present a satisfactory research thesis in lieu of two papers in the examination, if such options are provided; and
  - (e) have achieved a cumulative GPA of 2.0 or above.
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## **Title of research thesis**

**ME 6.** Subject to the provisions of Regulation ME 5(d), candidates of the Advanced Research Stream shall submit the titles and proposals of their research thesis for approval by the supervisors before January first of the final academic year, and the research thesis shall be presented before August thirty-first of the final academic year. Candidates shall submit a statement that the research thesis represents their own work undertaken after registration in the course.

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## **Assessment**

**ME 7.** Candidates shall satisfy the examiners in all the prescribed courses as specified in the syllabuses. Examinations shall normally be held at the end of each course, unless otherwise specified. Only passed courses will earn credits.

**ME 8.** Candidates who have failed a course shall be required to sit for re-examination or to retake the course. If the failure is an elective course, candidates may elect to take another course as a substitute.

**ME 9.** Subject to the provisions of Regulation ME 5(d), candidates who have failed to present a satisfactory project paper or research thesis may be permitted to submit a new or revised project paper or research thesis within a specified period.

**ME 10.** Candidates who are unable, because of illness, to be present at the written examination of any course may apply for permission to present themselves at a supplementary examination of the same course to be held before the beginning of the following academic year. Any such applications shall be made on the form prescribed within two weeks of the first day of the candidates' absence from the examination.

**ME 11.** Candidates shall not be permitted to repeat a course for which they have received a passing grade for the purpose of upgrading.

**ME 12.** Candidates who have failed a total of more than two examinations/assessments or re-examinations/re-assessments during the entire period of study of the curriculum or who are not permitted to submit a new or revised research thesis shall be recommended for discontinuation under the provisions of General Regulations G12.

**ME 13.** There shall be no appeal against the results of examinations and all other forms of assessment.

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## Grading system

**ME 14.** Courses shall be graded according to the following grading system:

<i>Grade</i>		<i>Standard</i>	<i>Grade Point</i>
A+	}	Excellent	4.3
A			4.0
A-			3.7
B+	}	Good	3.3
B			3.0
B-			2.7
C+	}	Satisfactory	2.3
C			2.0
C-			1.7
D+	}	Pass	1.3
D			1.0
F		Fail	0

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## Assessment results

**ME 15.** On successful completion of the curriculum, candidates who have shown exceptional merit at the completion of the curriculum may be awarded a mark of distinction, and this mark shall be recorded in the candidates' degree diploma.

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## **SYLLABUSES FOR THE DEGREE OF MASTER OF ECONOMICS**

*These syllabuses apply to candidates admitted to the Master of Economics in the academic year 2021-22 and thereafter.*

### **CURRICULUM STRUCTURE**

Candidates must take a total of ten 6-credit, or eight 6-credit and one 12-credit courses, including the completion of three core courses (on microeconomics, macroeconomics and econometrics) and a capstone course. They shall concentrate in one of the streams: Advanced Research Stream, Data Analysis Stream, Policy Analysis Stream and Theory Stream.

A list of electives will be announced at the beginning of the academic year. Up to two elective courses may be chosen from other taught postgraduate curricula offered by the Faculty of Business and Economics under the advice and approval of the Programme Directors concerned.

#### **I. Fundamental Core Courses (Choose all) (6 credits each)**

##### Advanced Research Stream/ Theory Stream

1. ECON6011 Microeconomic Theory
2. ECON6012 Macroeconomic Theory
3. ECON6001 Applied Econometrics/ ECON6005 Econometric Theory I

##### Data Analysis Stream/ Policy Analysis Stream

1. ECON6021 Microeconomic Analysis/ ECON6011 Microeconomic Theory (for candidates with strong undergraduate training in economics and mathematics)
2. ECON6022 Macroeconomic Analysis/ ECON6012 Macroeconomic Theory (for candidates with strong undergraduate training in economics and mathematics)
3. ECON6001 Applied Econometrics/ ECON6005 Econometric Theory I

#### **II. Stream Core Courses (6 credits each)**

##### Advanced Research Stream/ Theory Stream (Choose Three)

- ECON6002 Selected Topics in Microeconomics I
- ECON6010 Monetary Policy: Theory and Practice
- ECON6036 Game Theory and Applications
- ECON6052 Selected Topics in Macroeconomics I
- ECON6056 Econometric Theory II
- ECON6077 Topics in Economic Research I\*
- ECON6078 Topics in Economic Research II\*
- ECON6081 Quantitative Macroeconomics: Data, Model and Policy

##### Data Analysis Stream (Choose Three)

- ECON6067 Computation and Analysis of Economic Data
  - ECON6074 Causal Inference
  - ECON6082 Data Visualization
  - ECON6083 Applied Machine Learning
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#### Policy Analysis Stream (Choose Three)

- ECON6008 International Macroeconomics
- ECON6032 International Trade and Multinationals
- ECON6034 Competition, Regulation and Business Strategy
- ECON6075 Economic Policy I
- ECON6076 Economic Policy II

\* It can also be used to satisfy the Capstone requirement under Item III for candidates in the Theory Stream.

### **III. Capstone Courses**

#### Advanced Research Stream

- ECON6080 Research Thesis (12 credits)

#### Data Analysis Stream

- ECON6068 Advanced Topics in Applied Econometrics (6 credits)

#### Policy Analysis Stream

- ECON6069 Advanced Topics in Economic Policy (6 credits)

#### Theory Stream (Choose One)

- ECON6077 Topics in Economic Research I (6 credits)
- ECON6078 Topics in Economic Research II (6 credits)

### **IV. Electives**

Candidates can choose electives from a list of courses to make the total number of credits taken sixty. Core courses can be taken as electives to fulfil the graduation requirements provided that they are not counted as core courses.

## **DESCRIPTION OF COURSES**

### **ECON6001 Applied Econometrics (6 credits)**

This course examines how practical problems can be solved by using econometric methods. The emphasis is on the analysis of real world economic data using advanced statistical software. Topics include: estimation and testing of linear regression models, regression diagnostics, robust estimation, bootstrap, panel data, nonlinear least squares, discrete choice models and forecasting methods.

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### **ECON6002 Selected Topics in Microeconomics I (6 credits)**

This is a special course that deals with various topics of microeconomics. Topics covered may vary from year to year, depending on the research interests of the instructor.

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### **ECON6011 Microeconomic Theory (6 credits)**

This course covers how consumers and producers make choices and how these choices are equilibrated by the market. In the part on choice theory, utility maximization and profit maximization problems together with corresponding dual problems are considered. Optimal value functions are studied and used to perform comparative static analysis. Restrictions imposed by optimization on consumer and producer behaviour are discussed. Choices under uncertainty are also investigated. The second part mainly covers the equilibrium in perfectly competitive markets and the two fundamental welfare theorems. It will also discuss the consequences of market failures, including public goods, externalities, and market power. Game theory will also be introduced.

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**ECON6012 Macroeconomic Theory (6 credits)**

This course covers neo-classical macroeconomics, the Keynesian model and its problems, the consumption function and investment and economic fluctuations, supply and demand of money, the counter-revolution in monetary theory, inflation and unemployment and alternative policies for dealing with them, and open economy macroeconomics.

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**ECON6021 Microeconomic Analysis (6 credits)**

This course provides an advanced treatment of standard tools and frameworks in microeconomics that are used in other courses of the curriculum. Topics include: constrained and unconstrained optimization, consumer theory, uncertainty and information, cost and production, and market structure and equilibrium.

*Note: This course is not open to candidates who have taken or are taking ECON6011.*

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**ECON6022 Macroeconomic Analysis (6 credits)**

This course is an advanced treatment of the theory of the determination of national income and aggregate economic behaviour. Topics include: national income accounting, employment theory, inflation and deflation, monetary and fiscal policy for economic stabilization, economic growth, and international economic issues. Applications to contemporary economic issues are emphasized.

*Note: This course is not open to candidates who have taken or are taking ECON6012.*

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**ECON6005 Econometric Theory I (6 credits)**

This course is an introduction to econometric theory and applications at an advanced level. Candidates are expected to be proficient in calculus, matrix algebra, and econometrics at the undergraduate level. Potential topics to be discussed include the classical linear model, generalized method of moments, and multiple equation models.

*Note: Candidates may be required to pass a mathematics test in order to take the course.*

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**ECON6006 Economics of Organization and Strategy (6 credits)**

The organization component of this course discusses different theories of the firm, including the property rights approach and the incomplete contracting model. It forms the basic framework that is used to understand how various decisions are made within a firm. The incomplete contracting model can be further extended to study financial decisions such as capital structure, bankruptcy, and corporate voting. The strategy component uses game theory to understand how firms formulate strategies to cope with different competitive forces. Cases are used to illustrate how these strategies work. Examples include the meet-the-competition and most-favored-customer contractual clauses.

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**ECON6007 Industrial Organization (6 credits)**

This course covers alternative forms of economic organizations, including the contractual nature of the firm, the meaning of monopoly and patent rights, the extraction of consumer surplus, and the purpose of integration and franchise arrangements. Government regulations will be discussed whenever appropriate.

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**ECON6008 International Macroeconomics (6 credits)**

This course examines how openness in the form of commodity trade and factor (especially capital) mobility affects long-run growth and short-run fluctuations, as well as the effects of macroeconomic policies, across countries. Topics include: international income convergence; international business cycles; international policy coordination; exchange rate and balance of payments dynamics; currency and other financial crises; and puzzles in international financial markets.

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**ECON6009 Labour Economics (6 credits)**

This course examines the operation of labour markets. The analytical approach is largely based on microeconomic theory. Attention is also given to issues involved in drawing inference from labour market data. Topics include: the theory and estimation of labour demand and supply, the selection problem, the structure of wages, the choice of labour contracts, investment in human capital, immigration and emigration, worker turnover and labour market frictions, labour market discrimination, and unemployment.

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**ECON6010 Monetary Policy: Theory and Practice (6 credits)**

This course traces the evolution of central banks over the last 200 years from primitive financial clearing-houses to promoters of macroeconomic stability and growth as a natural progression as policy-makers sought to combat various challenges to macroeconomic stability, such as inflation and systemic financial risk. The course will discuss different monetary policy regimes, including currency boards and inflation targeting, and the inherent trade-offs between them, focusing especially on the importance of credibility and expectations. Optimal monetary policy design and the monetary transmission mechanism will also be covered.

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**ECON6014 Trade, Investment and Development in East Asia (6 credits)**

This course examines various current topics and economic development problems facing East Asian economies. This course is mainly empirical. The economies we consider include China, Hong Kong, Taiwan, South Korea, Japan, Singapore and selective members of the ASEAN. The topics to be covered will vary and be updated from year to year. Some of the main current economic issues include the competitiveness of East Asian economies, proposals for free trade areas, foreign direct investment and the economic strategy of multinational corporations, sources of past and future economic growth in East Asia, industry structure, technology policies, the Asian financial crisis, banking problems and exchange rate regimes.

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**ECON6015 Public Economics (6 credits)**

This course covers the positive and normative analyses of the public sector in relation to efficiency and equity. It provides a better understanding of the making of public policy under asymmetric information and limited commitment, and the role of incentives in public administration. Topics include: market failure, welfare criteria, public goods and externalities, social choice and voting, income distribution, public pricing and investment, cost-benefit analysis and project appraisal, and the regulation of public enterprises.

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**ECON6031 The Chinese Economy (6 credits)**

This course reviews the economic transformation of the People's Republic of China and its implications. China's experiences are subjected to theoretical and empirical analysis by using modern economic methods. The course covers structural and institutional changes as well as current debates on reform and policy. Topics include: history, geography, population, rural reform, industrialization, urbanization, enterprise reform, foreign trade and investment, financial system, and regional development.

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**ECON6032 International Trade and Multinationals (6 credits)**

This course deals with the important issues of globalization focusing on international trade and multinationals. It includes both the traditional and contemporary theories. Topics include pattern of trade, comparative advantage, gains from trade, trade policy, factor mobility, bilateral and multilateral trade agreements, offshoring and decisions of multinationals. Each topic covers both theoretical and empirical analyses.

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**ECON6033 Corporate Finance (6 credits)**

This course focuses on financial decisions in the modern corporation. Topics include: capital budgeting, cost of capital, capital structure, dividend policy, public offerings, and incentives and contracting problems. There will also be some treatment of mergers and acquisitions, and corporate governance. The objective of the course is to integrate these various topics into standard theories of risk and return and the valuation of assets in order to provide a theoretical framework for considering corporate finance problems and issues, with an understanding of how it applies to the real world.

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**ECON6034 Competition, Regulation and Business Strategy (6 credits)**

Governments regulate markets to varying degrees. This course studies the economics of competition, monopolies and cartels, theories of regulation, regulation and taxation, and rent-seeking behaviour. These concepts are used to understand how business strategy in regulated markets differs from that in competitive markets. Selected case materials based on contemporary local examples from banking, container terminals, electricity and gas, transportation, telecommunications, air services, housing and property, and the gaming industry will also be used in classroom discussions.

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**ECON6035 Political Economy of Economic Policy (6 credits)**

This course studies the relationship between the state and the market economy, especially highlighting the costs and benefits of economic policy interventions. Topics include: the economic value of the rule of law, property rights and institutional change, promoting competition and regulating markets, rules versus discretion in monetary, fiscal and exchange rate policy, and regionalism versus federalism. Selected case materials based on historical and contemporary examples will be used in classroom discussions, including international examples with emphasis on Hong Kong, China and Asia.

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**ECON6036 Game Theory and Applications (6 credits)**

This course covers game theory and its applications to various fields of economics. It studies static games with complete information, dynamic games with complete information, static games with incomplete information, dynamic games with incomplete information, and the equilibrium concepts corresponding to these games. It considers applications of these concepts to the study of industrial organization, international trade, labour economics, public economics, corporate finance, and monetary economics. Applications to auction and bargaining are also considered. Finally, it offers an introduction to mechanism design and its application to the procurement problem.

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**ECON6037 Economic Forecasting (6 credits)**

This course introduces basic techniques of forecasting, based on economic and structural time series models. ARIMA and regression models with trend, season, and cycle components will be considered. The hands-on experience in applying the techniques to real-world problems is emphasized. Topics include: basics of linear regression, modeling and forecasting trend and seasonality, basics of ARIMA models, forecasting cycles, forecasting with regression models, evaluating and combining forecasts, unit roots, stochastic trends, ARIMA models, and volatility models.

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**ECON6038 Health Economics (6 credits)**

This course provides an overview of how economics play a role in the health care sector. Emphasis will be placed on contrasting the viewpoints of free-market economists and public health practitioners. Among the topics we discuss are the unique features of health in economic modeling, the demand for health and health care, equity and efficiency issues, forms of health care financing, an overview of cost-effectiveness and cost-benefit analysis, and National Health Accounting. Examples are drawn from local and international contexts.

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**ECON6039 Project Evaluation (6 credits)**

This course covers the economic evaluation of projects from a public sector viewpoint using microeconomic tools. It explores the normative aspects of evaluating public projects and policies, the measurement of welfare change and public investment criteria. The concept of opportunity cost and benefit will be examined. Economic evaluation of government projects and Build-Operate-Transfer infrastructure projects will be discussed.

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**ECON6040 Transportation Economics (6 credits)**

This course covers the theory and practice of modern transport economics using microeconomic tools. It views the buyer of transport services – be it passenger or freight – as playing a dual consuming and producing role. Topics include widgets versus transport, transport costs (internal and external), travel demand and the value of travel time, regulation and competition, and the cost-benefit analysis of transport projects. Contemporary issues in transport will also be analyzed from a transport economics methodological and welfare economics approach.

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**ECON6041 Alternative Approaches to Economic Analysis (6 credits)**

In this course, we introduce and examine the principal ideas held by radical thinkers such as Marx, Velben, Commons, Robinson, and Sen in their critiques of capitalism and of neoclassical economics. The discourse is organized in the following topics: endogeneity of preferences, theories of wants and needs, theories of justice and fairness, macroeconomic instability of capitalism, socialism as an alternative to capitalism, and nationalism versus internationalism. The course emphasizes the use of modern analytic tools and will make use of, in particular, the recent progress in behavioural economics.

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**ECON6042 Mathematical Economics (6 credits)**

This course presents both static and dynamic general equilibrium based on optimization to study interrelated macroeconomic issues. In particular, Pontryagin optimal control theory and Bellman certainty and stochastic dynamic programming models will be covered. Such control theory and recursive multi-stage optimization methodology will be applied to important macro topics such as economic growth and employment.

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**ECON6052 Selected Topics in Macroeconomics I (6 credits)**

This is a special course that deals with various topics of macroeconomics. Topics covered may vary from year to year, depending on the research interests of the instructor.

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**ECON6053 Selected Topics in Financial Economics (6 credits)**

This is a special course that deals with various topics of financial economics. Topics covered may vary from year to year, depending on the research interests of the instructor.

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**ECON6055 Selected Topics in Investments and Asset Pricing (6 credits)**

This course provides in-depth discussions on selected topics in investments, equilibrium and no arbitrage asset pricing theory. We will derive classic results on the mean-variance frontier, and asset pricing theory including the Capital Asset Pricing Model, Arbitrage Pricing Theory, Merton's continuous time model, the Black-Scholes option pricing models, and the Cox-Ingersoll-Ross term structure model. The objective of this course is to prepare candidates to read and appreciate research papers in academic journals and also provide a theoretical foundation to conduct advanced research in financial economics.

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**ECON6056 Econometric Theory II (6 credits)**

This course is a continuation of Econometric Theory I (ECON6005). Potential topics to be discussed include panel data, maximum likelihood estimation, nonlinear regression models, time series models, and cointegration. The course will examine both the theoretical properties of these estimators and their implementation with professional statistical software.

*Prerequisite: ECON6005*

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**ECON6057 China in the Global Economy (6 credits)**

This course will examine the progresses and challenges of China's rapid economic growth toward one of the largest economies in the world and its deepening integration into the global trade and financial systems. It will focus on China's interactions with the global economy and their domestic and international implications. The topics will include: Review of China's foreign trade and investment; reform, opening, growth and efficiency of China's domestic and external sectors and their impacts on the structure of China's balance of payments; China's currency and monetary policies and their impacts on the domestic and internal trade and finance; China's capital market reform and development and their domestic and international implications; China's role in maintaining international financial order.

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**ECON6058 Selected Topics in Microeconomics II (6 credits)**

This is a special course that deals with various topics of microeconomics. Topics covered may vary from year to year, depending on the research interests of the instructor. However, topics covered in ECON6002 will not be covered in this course.

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**ECON6059 Selected Topics in Macroeconomics II (6 credits)**

This is a special course that deals with various topics of macroeconomics. Topics covered may vary from year to year, depending on the research interests of the instructor. However, topics covered in ECON6052 will not be covered in this course.

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**ECON6060 Development Economics (6 credits)**

This course covers topics pertinent to the development of low-income countries: economic growth, measurements of economic inequality, inequality and development and their inter-connections; poverty and under-nutrition, population growth and economic development, rural and urban, markets in agriculture, land, labour, credit and insurance, international trade, and trade policy. The course also teaches how to use data to conduct development analyses such as poverty assessments and impact analysis of development projects.

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**ECON6061 Network Economics (6 credits)**

This course is divided into two parts. Part I of the course introduces graph theory and game theory. Graph theory is used to describe the structure of a network and game theory to understand how people behave in network with different structures. Part II of the course focuses on analysing network structures and understanding behaviour in different network structures.

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**ECON6062 Advanced Topics in Economic Forecasting (6 credits)**

Building on student's previous background in Economic Forecasting, this course explores advanced topics in Economic Forecasting. These advanced topics may include forecasting when the relationship appears unstable, when we have a large number of candidate predictors, when real time data are available for updating our forecast, etc. We will also discuss the issues on forecasting various variables, such as output, inflation, the price of oil, real estate prices, interest rates, etc. While theory will be covered, our focus is in applications.

*Prerequisite: ECON6037*

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**ECON6063 Environmental Economics (6 credits)**

This course develops a solid understanding of environmental economics. The course covers important environmental issues including overuse of the environment (such as overfishing and excessive air pollution emissions) and too little provision of environmental public goods (such as preservation of endangered species habitats and investment on biodiversity). This course is designed to cover an in-depth discussion of an economic approach to environmental problems in order to show how factors such as property rights and transaction-cost considerations can encourage efficient natural resource use through environmental markets. For environmentalists, this course also offers concrete solutions to illustrate the importance of environmental entrepreneurship.

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**ECON6064 Advanced Topics in Economic Analysis (6 credits)**

This is a special course at the MEcon level that deals with various topics of microeconomics or macroeconomics, building on candidates' previous background in Microeconomic Analysis (ECON6021) and Macroeconomic Analysis (ECON6022). Topics covered may vary from year to year, depending on the research interests of the instructor. Candidates have the opportunities to apply their economic knowledge and research methodology in analyzing real-world problems (such as the economic impact of a specific business practice or government policy) in a theoretically and/or empirically rigorous manner.

*Prerequisite: ECON6021 and ECON6022 or equivalent*

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**ECON6065 Money and Banking (6 credits)**

This is a course in money and banking at the masters or first-year graduate level. It discusses the role of money and the banking system in the economy and how they affect aggregate economic activity like inflation, interest rates and output growth. Topics include theories of money demand and supply, theories of interest rates, issues related to conduct of monetary policy, such as targets and indicators, rules versus discretion, time inconsistency, credit market imperfections, banking crisis, bank regulation, deposit insurance, among many others.

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**ECON6067 Computation and Analysis of Economic Data (6 credits)**

This is a core course for MEcon students taking the Data Analysis Stream. It is designed to familiarize students with data analysis tools used extensively in academia and the industry. The emphasis is on the application of econometric methods to the analysis of real world economic data using advanced statistical software. Statistical packages covered in the course may consist of, but not limited to, Excel, STATA, R, Matlab and Python.

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**ECON6068 Advanced Topics in Applied Econometrics (6 credits)**

Building on student's previous background in Applied Econometrics (ECON6001), this course explores advanced topics in Applied Econometrics. Topics covered may vary from year to year, depending on the research interests of the instructor. While theory will be covered, our focus is on applications. Students have the opportunities to apply their knowledge in data analysis and economic concepts in analyzing real-world problems in an empirically rigorous manner.

*Prerequisite: ECON6001 or equivalent*

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**ECON6069 Advanced Topics in Economic Policy (6 credits)**

This is a special course at the MEcon level that deals with various topics of economic policy. Topics covered may vary from year to year, depending on the research interests of the instructor. Students have the opportunities to apply their economic knowledge and research methodology in analyzing important economic policies, either historical or contemporary.

*Prerequisite: ECON6021 and ECON6022 or equivalent*

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**ECON6070 Applied Financial Econometrics (6 credits)**

Financial econometrics is the intersection of statistical techniques and finance. Financial econometrics provides a set of tools that are useful for modeling financial data and testing beliefs about how markets work and prices are formed. Conversely, new techniques in analyzing financial data can lead to empirical facts inconsistent with existing theories, begging for new models or investment strategies. We focus on several empirical techniques which are often used in the analysis of financial markets and how they are applied to actual data.

*Prerequisite: ECON6001 or equivalent*

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**ECON6071 Urban Economics (6 credits)**

In this course, we study how households and firms choose to agglomerate in confined urban areas and how the two choices interact to give rise to the spatial structure of economic activities. It examines the question of the where of economic activity, a question largely ignored in other branches of economics. Topics include the determination of the internal structure of cities, the sources and consequences of agglomeration economies, how cities may be too crowded or too sparsely populated, urban economic growth, urban labour market, urban transportation, and special topics, including but not restricted to urban crime and the future of cities.

*Prerequisite: ECON6021 or equivalent*

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**ECON6072 Economic Analysis of Aging Societies (6 credits)**

The magnitude of demographic changes, including falling birth rates and rising life expectancy, has been substantial in many societies. Why do population changes of such magnitude arise, and how do they affect individual behaviour of households and firms, as well as the aggregate economy? This course examines these demographic changes, their consequences, and related policy issues. We first look at the time trend and cross-country differences in demographic variables such as mortality, fertility, immigration and age structure. We then study economic consequences of demographic changes, including demographic dividend, saving and retirement decisions, human capital accumulation, and technological progress. Finally, we examine policy issues related to population aging, such as retirement pension and health care reform.

*Prerequisite: ECON6021 and ECON6022 or equivalent*

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**ECON6073 Mechanism Design (6 credits)**

This course provides a systematic, comprehensive, and in-depth review of mechanism design and is divided into three parts. Part I of the course covers theory of mechanism design including the following topics: Mechanism Design Basics, Myerson's Lemma, Algorithmic Mechanism Design, Revenue-Maximizing Auctions, Simple Near-Optimal Auctions, and Multi-Parameter Mechanism Design. Part II of the course showcases applications of mechanism design with the following case studies: Spectrum Auctions, Mechanism Design with Payment Constraints, and Kidney Exchange and Stable Matching. In Part III of the course, students present their work on a research question and demonstrate their research ability in workshops.

*Prerequisite: ECON6021 or equivalent*

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**ECON6074 Causal Inference (6 credits)**

This course introduces students to the challenges of interpreting observational data, and to different approaches designed to overcome these challenges. Drawing on examples from different areas in economics, the course provides an overview of research designs that aim at extracting credible causal relationships, such as difference-in-differences, matching estimators, instrumental variables, regression discontinuity, audit studies, natural experiments, and randomized control experiments. Students will be given hands-on experience with these research designs, and will learn their theoretical underpinning as well as their limitations.

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**ECON6075 Economic Policy I (6 credits)**

This course will be taught by teacher(s) who have special expertise in different areas of economic policy. Emphasis is put on using economic analysis to shed light on the rationale behind specific economics policies and their implications for citizens and for business practices. The topics covered will vary depending on the expertise of the teaching staff; examples may include technology and the economy, income inequality, political economy of Hong Kong, political economy of China, trade policies in a globalized world, financial crises, land use policies, housing policy, competition policy, retirement protection, minimum wage, and health care policy.

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**ECON6076 Economic Policy II (6 credits)**

This course will be taught by teacher(s) who have special expertise in different areas of economic policy. Emphasis is put on using economic analysis to shed light on the rationale behind specific economics policies and their implications for citizens and for business practices. The topics covered will vary depending on the expertise of the teaching staff; examples may include technology and the economy, income inequality, political economy of Hong Kong, political economy of China, trade policies in a globalized world, financial crises, land use policies, housing policy, competition policy, retirement protection, minimum wage, and health care policy. However, topics covered in ECON6075 will not be covered in this course.

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**ECON6077 Topics in Economic Research I (6 credits)**

This course will be taught by teacher(s) who have special expertise in different fields in economics. Students are introduced to the basic set of questions addressed by each field of specialization covered, and the conceptual framework commonly adopted to address these questions. Emphasis is put on making sure that students are familiar with the literature in the relevant field, and are equipped with the tools to do their independent research. The fields covered will depend on the interests of students and the availability of teaching staff with expertise in the relevant fields. The fields of specialization covered may include labour economics, public economics, political economy, economic growth and development, economic history, industrial organization, international trade, international macroeconomics, and urban economics.

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**ECON6078 Topics in Economic Research II (6 credits)**

This course will be taught by teacher(s) who have special expertise in different fields in economics. Students are introduced to the basic set of questions addressed by each field of specialization covered, and the conceptual framework commonly adopted to address these questions. Emphasis is put on making sure that students are familiar with the literature in the relevant field, and are equipped with the tools to do their independent research. The fields covered will depend on the interests of students and the availability of teaching staff with expertise in the relevant fields. The fields of specialization covered may include labour economics, public economics, political economy, economic growth and development, economic history, industrial organization, international trade, international macroeconomics, and urban economics. However, topics covered in ECON6077 will not be covered in this course.

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**ECON6079 Behavioural Economics (6 credits)**

The course introduces behavioural economics and tries to keep it in historical context. Behavioural economics and rational models of economics are considered to be complementary instead of competing. Rational models are covered in the course to provide us a solid background to appreciate the contributions of behavioural economics. Behavioural economics helps us better understand decision-making under certainty, judgment under risk and uncertainty, decision-making under risk and uncertainty, and intertemporal choice. Although rational models are not perfectly consistent with actual behaviour, they can be used to show how choice and decision can be improved.

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**ECON6080 Research Thesis (12 credits)**

The course is designed for students who are admitted to the Advanced Research Stream. The Research Thesis shall consist of original work written under the supervision from one of the faculty members at the Faculty of Business and Economics. Students shall submit the titles and proposals of their research thesis for approval by the supervisors before January first of the final academic year, and the research thesis shall be presented before August thirty-first of the final academic year. The research thesis, which should not exceed 30,000 words in length, shall be graded by the supervisors and approved by the MEcon Board of Examiners. Assessment shall be conducted in the form of 100% coursework.

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**ECON6081 Quantitative Macroeconomics: Data, Model and Policy (6 credits)**

This course will equip students with the numerical tools (data skills and computation skills) necessary to tackle interesting questions in quantitative macroeconomics. The course consists of three major parts: data, model, and policy. The first part focuses on showing students how to deal with macro and micro data in economics and more importantly, how to find interesting empirical patterns from the data. The second part is about the study of computational methods and algorithms useful to solving and analyzing macro models. The third part is devoted to ongoing frontier research in macroeconomics based on heterogeneous-agent models.

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**ECON6082 Data Visualization (6 credits)**

This course will introduce students to the principles and techniques of data visualization. Students will learn the value of visualization, specific techniques to clear, manipulate, and visualize different types of data, and how to best leverage visualization. Through examples, in-class demonstration, student will master the procedures and programming skills to visualize six conventional types of data relationships: Relation, comparison, distribution, proportion, time series, and spatial, as well as the more advanced methods for interactive visualization and visualizing spatial raster, network, or high-dimensional data. Students will also learn how to harvest the advantages of the programming language of R to automate the process of data manipulation in batch.

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**ECON6083 Applied Machine Learning (6 credits)**

This course is an in-depth introduction into modern Machine Learning (ML) learning techniques for economists. Unlike in some other disciplines where ML is used for prediction, in economics we typically interested in estimation of structural or causal relationships between variables. In this course, we will focus on two ML techniques, Lasso and Random Forests, that have been adapted for use in applied econometrics for the purpose of estimation and inference on structural and causal effects. We will discuss the need for ML methods in empirical work in economics, the statistical properties of the ML methods, and discuss their applications.

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**ECON6084 The Economics of Law (6 credits)**

Economic analysis applied to law. Topics may include: efficiency of law, rules of liability, tort rights and remedies, criminal sanction, legislative processes as resource allocating and income distributing mechanisms.

*Prerequisite: ECON6011 or ECON6021 or equivalent*

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**ECON6085 Topics in Macroeconomic Research of China (6 credits)**

The course will cover some selected research topics that are relevant for China such as growth, structural change, trade and migration, banking system and monetary policy, DSGE models with Chinese characteristics, etc. For each topic, there will be discussions of both the appropriate theoretical framework and methods and their applications to the Chinese economy.

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**ASSESSMENT**

Candidates shall be assessed for each of the courses for which they have registered, and assessment is normally conducted in the form of coursework assessment (40-60%) and examinations (40-60%), unless otherwise specified by the course instructor.