Master of Science (Economics)

Developed and awarded by University of Birmingham, UK

COMPULSORY MODULES

MACROECONOMICS (20 credits)

The module is divided into two components: (1) Growth and Business Cycles; (2) Open Economy Macroeconomics.

1. Growth and Business Cycles
This component of the course investigates the time paths of consumption, output, capital, labour, factor prices and real money, under the assumption of intertemporal optimisation. Traditional and endogenous growth theories are discussed and their public policy implications considered.

2. Open Economy Macroeconomics
This component is divided into three parts. In the first, the relationships between goods markets and asset markets in different countries are discussed; this involves the discussion of topics such as purchasing power parity and uncovered interest parity; the second considers a variety of open macroeconomic models including the Mundell-Fleming and Dornbusch models and the third considers policy issues such as exchange rate target zones and speculative attacks on fixed exchange rate regimes.

MICROECONOMICS (20 credits)

Adopting a formal (i.e. mathematical) approach, the module deals with the foundations of economics, examining the behaviour of the two most basic agents of the economy, the consumer and the firm, their interaction in markets, and social decisions.

The module emphasises the formal derivation of results and problem solving. The main theoretical devices employed are optimization theory and elements of game theory, while mathematical techniques with which students are unfamiliar will be explained during the module.

ECONOMETRICS (30 credits)

This module will provide students with an understanding of modern advanced econometric procedures, with emphasis placed on interpreting econometric results and critically evaluating the techniques employed. In the first semester there will be a technical review of the classical linear model, examining the implications when the key assumptions are violated. This will be followed by a general survey of the main techniques in the applied literature. Both computer and econometric theory classes will support the lectures, providing examples of specific practical problems.

The module will provide an in-depth examination of the applied econometrics literature, focusing on the recent developments. The lectures will include examples of econometric modelling using stationary and non-stationary data, panel estimation and generalised linear models for binary and categorised dependent variables. Statistical inference and diagnostic testing will be highlighted.

GAME THEORY (20 credits)

The main emphasis of the module will be on the discussion and description of solution concepts appropriate for various types of economic problems. This module aims to provide the theoretical background necessary to understand game theoretic models and how these models are applied as a tool to solve problems in economics. These are becoming increasingly common in many areas, such as Industrial Organization, Political Economy, International Trade and Environmental Economics.

DISSERTATION (60 credits)

Following the completion of the taught part of the programme, you will be expected to complete a 10,000 to 12,000 word dissertation. You will be supervised during the compilation of the dissertation. The dissertation is your opportunity to specialise in researching a particular area of Economics. The topic will be your choice and you should try to link your topic to possible opportunities that may relate to the next steps in your future career.

A supervisor will be assigned to guide you with your dissertation.

OPTIONAL MODULES (choose 3)

ECONOMICS OF FINANCIAL MARKETS (10 credits)

The module covers the notions of risk and return in equity markets both in the context of asset pricing, with some consideration given to the management of equity portfolios. The stochastic discount factor approach is employed to present a general theory of the pricing of stocks, bonds, and derivatives and enables the estimations of particular models derived from the general theory. Emphasis will initially be given to the analysis of the time series properties of asset returns, such as fat tails and skewness, and dynamic properties, for example volatility clustering and long memory, will be investigated. The capital asset pricing model (CAPM) and the arbitrage pricing theory (APT) will be used as the foundation of the equilibrium pricing of financial assets. The discount factor, Generalised Methods of Moments and state- space language are considered in the context of the beta, mean-variance, and regression language common in empirical work and earlier theory. The module concludes by looking at the new research area of behavioural finance

INTERNATIONAL TRADE POLICY (10 credits)

This course will analyse the causes and consequences of trade policy. It will then investigate the motives for nations or group of nations to restrict or regulate international trade and study the effects of such policies on economic welfare. We will also spend some time discussing aspects of the different ways of trade integration such as custom unions, preferential trade agreements, as well as the pros and cons of unilateral policies pursued by individual countries, regionalism and multilateralism.

Although the course will emphasize the understanding of past and current use of active trade policy, we will rely on formal economic modelling to help us understand these events. We will mainly use general equilibrium models and when needed adopt a partial equilibrium setting. Classes will provide some training on such analytical tools.

Topics covered: What is trade policy? Infant industry protection; The effects of trade policy; Tariff effects in small and large countries; Regionalism versus Multilateralism; Trade and Inequality; The Political Economy of Trade Policy.

MONETARY POLICY (10 credits)

Monetary Policy investigates the empirical relationships between money growth, output growth and inflation in a variety of macroeconomic settings. It begins by covering the functions of money and the links between money and inflation, looking at both short-run and long-run relationships. The role of imperfect competition and price rigidities are analysed, along with new Keynesian models which consider price setting in the context of the New Keynesian Phillips curve. The module concludes by assessing the optimal design of economic policy by discussing the objectives and instruments of monetary policy. The theory and practice of monetary policy in recent years are examined in a global context.

RISK, UNCERTAINTY AND INFORMATION (10 credits)

The module deals with questions of how economic agents make decisions in situations under risk and uncertainty. Topics discussed may include: foundations of expected utility theory and its applications, violations of expected utility axioms, alternative models and their applications, measurement of social preferences using a number of simple experimental games and their policy implications.