

## **MSc Applied Economics - SH500**

This is a two-year part-time postgraduate programme whereby students can specialise in four different areas of study and eventually be awarded the following specialised degrees according to their options:

- (i) MSc Applied Economics (Specialisation: Banking and Finance)
- (ii) MSc Applied Economics (Specialisation :Economic Policy and Development)
- (iii) MSc Applied Economics (Specialisation: International Trade and Economic Diplomacy)
- (iv) MSc Applied Economics (Specialisation: Environmental Economics and Policy)

### **1. Objectives**

The objectives of the MSc Applied Economics Programme are:

- to provide a postgraduate level educational opportunity to acquire skills in standard economic analysis and its applications to real world situations by business firms, financial institutions, and government agencies;
- to prepare individuals to assume key positions of responsibility by upgrading their knowledge and skills to comparable international standards;
- to develop the ability to identify problems and the capacity for decision-making, leading to practical solutions; and
- to enhance the individual's capacity to meet emerging challenges within an organisation with a view to increasing domestic and international competitiveness in a rapidly changing global environment.

### **2. General Entry Requirements**

Successful completion of an undergraduate degree with

- at least a Second Class or 50%, whichever is applicable or
- a GPA not less than 2.5 out of 4 or equivalent, from a recognised higher education institution.

**OR** alternative qualifications acceptable to the University of Mauritius.

### **3. Programme Requirements**

Same as above.

### **4. General and Programme Requirements – Special Cases**

The following may be deemed to have satisfied the General and Programme requirements for admission:

- (i) Applicants who do not satisfy any of the requirements as per Regulations 2 and 3 above but who submit satisfactory evidence of having passed examinations which are deemed by the Senate to be equivalent to any of those listed.

(ii) Applicants who do not satisfy any of the requirements as per Regulations 2 and 3 above but who in the opinion of Senate submit satisfactory evidence of the capacity and attainments requisite to enable them to pursue the programme proposed.

(iii) Applicants who hold a full practising professional qualification obtained by examination.

## 5. Programme Duration

The Programme will be offered on a part-time basis.

The minimum period for the completion of the degree is four semesters and the maximum period is eight semesters.

6. **Credits per Semester:** Minimum 3 credits subject to Regulation 5.

7. **Minimum Credits Required for Degree Award:** 36

Breakdown as follows:

	Core Taught Modules	Dissertation	Electives		Total
			Specialisation Area Modules	Other Electives	
Master's Degree:	12/24* credits	12 credits	9 credits/Nil*	3 credits/Nil*	36 credits

\* Only for specialisation in Environmental Economics and Policy

## 8. Assessment

Each module will carry 100 marks and will be assessed as follows (unless otherwise specified):

Written examination of 3-hour duration and continuous assessment carrying 10% to 30% of total marks.

Continuous assessment may be based on seminars and/or assignments and should include at least 1 class test.

For a student to pass a module, a minimum of 30% should be attained in both of Continuous Assessment and Written Examination separately, with an overall total of a minimum of 40% in that module.

No resit examinations will be organised. Instead, students will be allowed to carry forward a maximum of three modules at any point in time and will be allowed to sit for the examinations with the next cohort of students.

All modules carry their own credit value.

Every student has to submit a dissertation of 12,000-18,000 words by the end of the fourth semester. The dissertation topic should preferably be selected from within the area of specialisation pursued by the student.

### Submission Deadlines for Dissertation

- First Draft: End of July in the Final Year.
- Final Copy: Last working day of August in the Final Year.

## 9. Choice of Electives and Specialisation Area Modules

Students will be required to submit their choice of electives and specialisation area modules in order of priority by the middle of Semester 1 of Year 1.

The University reserves the right not to offer a given elective module if the critical number of students is not attained and/or if there are resource constraints.

## 10. Important Note

The rules as stipulated in this Programme Structure and Outline Syllabus will replace all other rules and regulations.

## 11. Programme Plan - MSc Applied Economics

		<u>YEAR 1</u>					
Semester 1 Code	Module Name	Hrs/Wk L+P	Credits	Semester 2 Code	Module Name	Hrs/Wk L+P	Credits
<b>CORE</b>				<b>CORE</b>			
ECON 5117	Economics of Decision Making	3+0	3	ECON 5211	Information and Market Analysis	3+0	3
ECON 5112	Macroeconomic Analysis	3+0	3				
ECON 5118	Econometric Methods	3+0	3				
				<b>ELECTIVES</b>	<b>CHOOSE AT LEAST ONE*</b>		
				ECON 5043	Applied Econometric Modelling	3+0	3
				ECON 5018	Policy Analysis and Economic Management	3+0	3

		<u>YEAR 2</u>					
Semester 1				Semester 2			
<b><u>SPECIALISATION : ENVIRONMENTAL ECONOMICS &amp; POLICY</u></b>							
Code	Module Name	Hrs/Wk L+P	Credits	Code	Module Name	Hrs/Wk L+P	Credits
<b>CORE</b>				<b>CORE</b>			
ECON 6026	Ecosystem Mgt and Resource Economics **	3+0	3	ECON 5000	Dissertation	-	12
ECON 6027	Environmental Valuation and Policy**	3+0	3				
ECON 6028	Quantitative Methods for Environmental Economics**	3+0	3				
ECON 6029	Environment and Development Economics**	3+0	3				

### **SPECIALISATION: BANKING AND FINANCE**

		Semesters 1 and 2			
Code	Module Name			Hrs/Wk L+P	Credits
<b>CORE</b>					
ECON 5000	Dissertation			-	12
<b>ELECTIVES</b> <b>CHOOSE AT LEAST THREE</b>					
ECON 5012	Corporate Financial Strategy			3+0	3
ECON 5014	International Banking			3+0	3
ECON 5020	Banking Practices and Portfolio Analysis			3+0	3

ECON 5031	Financial Development Policy	3+0	3
ECON 5041	International Financial Markets	3+0	3

### **SPECIALISATION: ECONOMIC POLICY AND DEVELOPMENT**

		<b>Semesters 1 and 2</b>	
<b>Code</b>	<b>Module Name</b>	<b>Hrs/Wk L+P</b>	<b>Credits</b>
<b>CORE</b>			
ECON 5000	Dissertation	-	12
<b>ELECTIVES CHOOSE AT LEAST THREE</b>			
ECON 5124	Globalisation and Development	3+0	3
ECON 5029	Environmental Governance	3+0	3
ECON 5028	Economic Policy for Social Services	3+0	3
ECON 5042	Public Finance and Policy	3+0	3
ECON 5030	Tourism and Development Policy	3+0	3

### **SPECIALISATION: INTERNATIONAL TRADE AND ECONOMIC DIPLOMACY**

		<b>Semesters 1 and 2</b>	
<b>Code</b>	<b>Module Name</b>	<b>Hrs/Wk L+P</b>	<b>Credits</b>
<b>CORE</b>			
ECON 5000	Dissertation	-	12
<b>ELECTIVES CHOOSE AT LEAST THREE</b>			
ECON 6022	Regional Integration and Trade Diplomacy	3+0	3
ECON 6023	International Trade Policy and Institutions	3+0	3
ECON 6024	The WTO and Trade Negotiations	3+0	3
ECON 5015	International Trade and Business Strategy	3+0	3
ECON 5036	Intellectual Property Rights	3+0	3

#### **NOTE:**

1. Elective modules for specialisation streams will be offered subject to availability of minimum number of students and faculty resources.
2. \* Students opting for specialisation in Environmental Economics & Policy need not do any electives in Year 1.
3. \*\* Students would be expected to complete these modules at University of Pretoria, South Africa.
4. Students may be allowed to choose an elective from a different area of specialisation, only after having chosen two electives from his own area, and subject to approval of the Department.

## **12. Outline Syllabus**

This outline syllabus is not prescriptive and is intended to serve as a guide only.

### **ECON 5000 - DISSERTATION**

### **ECON 5012 - CORPORATE FINANCIAL STRATEGY**

Interest rate, time value of money and project appraisal. Cost of capital and capital structure. Dividend policy, short and long-term financing. Mergers, holding companies, acquisitions and corporate restructuring, Derivatives and risk management. Bankruptcy risk, reorganisation and liquidation.

### **ECON 5014 - INTERNATIONAL BANKING**

International monetary system. Eurocurrency markets. Exchange rates. Currency risk management. Offshore banking. Global financial services. Harmonisation of central banks' operations. Regulation of international banking.

### **ECON 5015 - INTERNATIONAL TRADE AND BUSINESS STRATEGY**

Export Policy and Market Access. Competition Policy and Strategy. International Trade Finance and Documentation. Commodity and Currency Risk Management. International Business Strategy: Strategic Choice, Modes of Entry and Strategic Alliances. Multinationals, Strategic Location and Technology Transfer.

**ECON 5018 - POLICY ANALYSIS AND ECONOMIC MANAGEMENT**

Development policy analysis. Issues in monetary and fiscal policies, price policy, exchange rate policy. Structural adjustment. Political economy of development. Policy models and simulation methodologies.

**ECON 5020 - BANKING PRACTICES AND PORTFOLIO ANALYSIS**

Commercial banking operations and institutional linkages. Deposits, lending and foreign exchange portfolios. Banks' response to commercial and developmental needs. Banking investment behaviour. Portfolio diversification and foreign exchange risk management. Coordination with Central Bank and international financial institutions.

**ECON 5028 - ECONOMIC POLICY FOR SOCIAL SERVICES**

Social services and market failure: health, education, housing, and social security. Access inequality. Measuring demand. Financing options. Regulation v/s privatisation. Community-based supply and NGOs. Affordability. Planning for sustainability.

**ECON 5029 - ENVIRONMENTAL GOVERNANCE**

Applied environmental and resource economics. Approaches to environmental accounting and valuation. Environmental dimensions of international trade and tourism. International environmental law. Case studies on transport, forestry, marine and coastal environmental management.

**ECON 5030 - TOURISM AND DEVELOPMENT POLICY**

Tourism and development. International competition for tourist development. Eco-tourism and the environment. Sustainability of tourism. Implications of tourism development for public finance and policy. Natural site conservation policies. Regional integration for tourism development.

**ECON 5031 - FINANCIAL DEVELOPMENT POLICY**

Investment, capital market imperfections and uncertainty. Banking regulation and financial market efficiency. Policy analysis for financial sectors. Conflicts between financial liberalisation and societal values. Financial development and economic growth. Reforming the international financial system.

**ECON 5036 - INTELLECTUAL PROPERTY RIGHTS**

IPR as a Tool of Economic Policy. Scope and Procedures. Copyright Laws and International Transactions. Specific Problems with Goods, Services and Technology. WTO and TRIPS. IPR and the Internet.

**ECON 5041 - INTERNATIONAL FINANCIAL MARKETS**

International financial architecture. Comparative valuation techniques, trading rules and different stakeholders. Role of uncertainty and information. Volatile and efficient markets. Contagion in financial markets. Financial crises and its consequences for globalisation. Regulation v/s liberalisation. Modelling financial markets.

**ECON 5042 - PUBLIC FINANCE AND POLICY**

Government budgets and business and industry. Effects on risk-taking, labour supply and savings. Optimal tax policy. Public sector production and pricing. Inter-governmental fiscal management. Pension fund management. Government and the Environment. International tax harmonisation.

**ECON 5043 - APPLIED ECONOMETRIC MODELLING**

Micro-econometric modelling: Market analysis – goods market, labour market, and financial market. Exchange-rate market. Public goods and environmental goods. Macro-econometric modelling: Issues related to monetary policy and fiscal policy, economic growth and international trade.

**ECON 5112 - MACROECONOMIC ANALYSIS**

Applied macroeconomics: Consumption and investment. Money and financial markets. Fiscal policy. Labour market. Inflation and unemployment. Structural Adjustment. Central banking and macroeconomic management. Harmonisation of fiscal, monetary, trade and exchange rate policies.

### **ECON 5117 - ECONOMICS OF DECISION MAKING**

Household decisions. Managerial objectives in the public and private sectors. Production decisions. Vertical and horizontal integration. R&D decisions. International business and investment decisions. Public goods supply.

### **ECON 5118 - ECONOMETRIC METHODS**

Time-series and cross-sectional regression analysis. Non-nested models and selection mechanisms. Econometrics of expectations. Simultaneous regression models. VAR models. Panel data analysis. Limited dependent variable models. Logit, probit and tobit models.

### **ECON 5124 - GLOBALISATION AND DEVELOPMENT**

International economic order. Globalisation and developing countries. Intricacies of policymaking in the global economy. Political economy of globalisation. Trade and fiscal policy harmonisation. Financial globalisation. Global finance and financial stability. Global development finance.

### **ECON 5211 - INFORMATION AND MARKET ANALYSIS**

Economics of information. Adverse selection and moral hazards. Incomplete markets. Principal-agent problem. Financial and labour markets. Commodity markets. Game theory, collusion and contestable markets. Globalisation of markets. Property rights.

### **ECON 6022 - REGIONAL INTEGRATION AND TRADE DIPLOMACY**

Regionalism and the WTO. The Economics of Preferential Trading Arrangements: Trade Creation and Trade Diversion. Issues in Regional Integration: 'Natural' Trading Partners, Neighborhood RTAs, Open Regionalism. Regionalism and the Multilateral Trading System. Regional Integration as Diplomacy.

### **ECON 6023 - INTERNATIONAL TRADE POLICY AND INSTITUTIONS**

Theories of Comparative Advantage (Ricardian, Ricardo-Viner, Heckscher-Ohlin) and Gains from Trade. Trade and Income Distribution. New Trade Theory and Intra-industry Trade. Instruments of Trade Policy. The Political Economy of Trade Policy. Trade Policy in Developing Countries. Strategic Trade Policy. International Trade Institutions: WTO and the World Trading System, Fundamental Principles of GATT, Decision-making in the WTO.

### **ECON 6024 - THE WTO AND TRADE NEGOTIATIONS**

WTO and International Trade Law. Laws relating to Trade and Investment, Market Access and Reciprocity. The Dispute Settlement Mechanism. Processes of International Negotiation. The Dynamics of Coalition-formation and Bargaining. Developing Country Issues and Institutional Reform. Special and Differential Treatment. Challenges of Small Island Economies. Case Studies.

### **ECON 6026 - ECOSYSTEM MANAGEMENT AND RESEARCH ECONOMICS**

This course will introduce students to the underlying key environmental processes and services, ecosystem management, techniques of optimisation overtime, optimal allocation and management of non-renewable and renewable resources.

#### Section 1 (10 hours): Ecosystems and environmental processes

This section will provide students with a basic but crucial understanding of key concepts of ecology and ecosystems functions. Those should include themes such as population ecology, ecosystem ecology, ecosystems services (provisioning of goods as well as supporting and enriching functions of ecosystems), biodiversity, etc. Also the section should introduce students to the basic concepts of carrying capacity, material balance and the laws of thermodynamics, resilience, entropy laws, etc.

#### Section 2 (12 hours): Review principles and techniques of inter-temporal optimisation

Review of basic principles and techniques of optimisation overtime necessary for understanding, analysis and management of the allocation of natural and environmental resources. Themes in this section should include dynamic optimisation, optimal control theory, calculus of variation, difference and differential equations and dynamic programming, uncertainty and stochastic optimal control.

#### Section 3 (14 hours): Management of natural resources

This section will provide students with the theory and methods of optimal management and extraction of renewable and non-renewable resources with and without extraction costs, optimal extraction programs under different market structures; exploration and discovery, recycling. Principles of optimal utilisation of

renewable resources; natural growth and regeneration; limitations of population models; maximum sustainable yield; steady state; optimal harvesting under different property rights regimes.

### **ECON 6027 - ENVIRONMENTAL VALUATION AND POLICY**

This course will review the basic principles of microeconomic theory needed for understanding and analysis of environmental problems, introduce market and non-market techniques of valuation of natural resources and environmental services, public goods and environmental externalities, property rights regimes and selection of appropriate environmental policy instruments for management of environmental externalities.

#### Section 1 (10 hours): Review principles of micro economic theory

Review of basic principles of microeconomic theory needed for understanding, analysis and management of the allocation of natural and environmental resources. The section should review the following themes.

1. Theory of consumers' choice, measures of economic surplus and willingness to pay, etc.
2. Welfare economics, market equilibrium, social optimality, pareto efficiency and equity
3. Efficiency and equity aspects of Inter-temporal equilibrium
4. Public goods, common property resources and externalities
5. Property rights regimes and institutional, policy and market failures
6. Brief introduction to some examples of correcting externalities (pigouvian taxes, etc.)
7. Game theory

#### Section 2 (12 hours): Valuation of natural resources and environmental services

Components of value; the concept of total use values (direct, indirect and non-consumptive), non-use values, option and intrinsic values. Welfare economics as the basis for valuation; consumer and producer surplus as measures of welfare change; willingness to accept/pay. Environmental valuation techniques; household production; hedonic pricing; contingent valuation and travel cost methods. Project level analysis: environmentally adjusted cost benefit analysis.

#### Section 3 (14 hours): Externalities and environmental policy

Environmental externalities; optimal pollution management in the presence of externalities. public goods; pure and rival environmental public goods; the free-rider problem and club goods. Environmental policy instruments, market based instruments; the efficiency of instruments; environmental user fees and charges; assurance bonds; fines and penalties. Regulations and standards; optimal regulation; safe minimum standards; standards and economic efficiency; sustainability and the maintenance of options for the future. Property rights: The Coase theorem and the allocation of property rights; transaction costs and the regulation of common property resources. Mixed instruments: tradable emissions permits, pollution offset systems. Other instruments: voluntary agreements, self-regulating co-operative outcomes. Selection of policy instruments.

### **ECON 6028 - QUANTITATIVE METHODS FOR ENVIRONMENTAL ECONOMICS**

This course will provide students with adequate understanding and equip them with the appropriate tools for measurement, modeling and analysis of environmental processes and the linkages between ecological and economic management systems and environmental accounting.

#### Section 1 (14 hours): Review principles and techniques of environmetrics

This section should review and introduce intermediate econometrics methods needed for understanding, analysis and management of the allocation of natural and environmental resources (some of which may be covered, though inadequately as part of the theory core courses). Themes to be covered in this section should include: models of qualitative choice (tobit, probit, multinomial, etc), systems of equations, time series analysis, switching models, panel data analysis, co-integration and models of self selection and multiple choice.

#### Section 2 (14 hours): Systems analysis, ecological and economy-wide modeling

This section will provide students with sufficient understanding of systems analysis, ecological modeling, modeling economic behaviour and systems (multi-sector and economy-wide models, Input-output models, SAM and CGE models), integration of ecological and economic management models.

#### Section 3 (8 hours): Natural resource and environmental accounting

This section will provide students with understanding of the theory and applications of environmental accounting. Adjusting conventional measures of income, wealth and welfare for omission of environmental values and depletion of natural assets; physical and monetary asset accounts; resource rents; genuine savings and measures of sustainable income.

## **ECON 6029 - ENVIRONMENT AND DEVELOPMENT ECONOMICS**

### **Section 1 (12 hours): Development and environmental degradation**

This section will provide students with adequate understanding of the relationship between various approaches to and models of economic growth and development and sustainable use of natural resources and the environment. Sources of environmental degradation and the paradigms of sustainable development.

### **Section 2 (12 hours): Trade and the environment**

This section will provide students with the appropriate tools and methods for modeling and analysis of the relationship between international trade and the environment. Theory and models of international trade, environmental impacts of trade, global (transboundary) environmental problems (climate change, etc), global environmental conventions (IPCC, RAMSAR, UNC to Combat Desertification, Biodiversity convention, etc.). Implications for local and regional economic policies and international trade.

### **Section 3 (12 hours): Poverty and environmental problems in Africa**

This section will provide students with methods and tools for proper understanding and analysis of the relationship between natural resource and environmental degradation and human well-being. Constituents and determinants of human well-being. Measurement of and valuation of environmentally related human well-being problems in Africa (health, poverty, equity, lack of economic, social, cultural securities and access to natural resources).