DEPARTMENT OF LOGISTICS

UNIVERSITY OF STELLENBOSCH

POSTGRADUATE INFORMATION:

TRANSPORT ECONOMICS

2019

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TRANSPORT ECONOMICS POSTGRADUATE MODULES

Anchor programmes:

BComHons (Transport Economics)
Programme module

Code	Module	Credits	Module Name
21008	778	120	BComHons (Transport Economics)

MCom (Transport Economics)
Programme modules

Code	Module	Credits	Module Name
21008	899	180	MCom (Transport Economics) Coursework- and Thesis

MCom (Transport Economics)
Programme module

Code	Module	Credits	Module Name
21008	879	180	MCom (Transport Economics) Full Thesis

MODULES FOR 2019				
Module number	**Module**	**Code**	**Lecturer**	**Credits**
	First semester			
4	Transport and Economic Development [TE] [Compulsory]	13473 711	Ms JM van der Merwe / Prof SC Krygsman	15
11	Introduction to Forecasting [LM] [Compulsory]	10911 723	Mr H Freiboth	15
13	Competition and Regulation [TE]	59102 715	Prof SC Krygsman	15
17	Road Transport Management [TE]	59145 744	Mr RA Janse van Rensburg	15
34	Shipping Economics [TE]	12995 773	Mr R Kgwedi / Mr G Dekkers	15
	Second semester			
8	Air Transport Economics [TE]	11275 742	Mr Corné de Waal / Mr J van Rensburg	15
21	Urban Transport Economics [TE] [Compulsory]	59153 742	Mr October	15
25	Forecasting [OR]	10933 753	Prof JH Nel	15
41	International Trade, Transport Infrastructure and Logistics [TE]	13076 744	Mr J van Rensburg	15
42	Rail Economics [TE]	13470 711	Prof Krygsman	15
Pass Prerequisite: Module 11 is a pass prerequisite for Module 25		Research Seminar, first and second semester: Transport Economics BComHons 11047 775		
		TE MCom 150 11245 874 (The 150 credit TE MCom program requires coursework of 30 credits) 180 11245 828		

MODULE 4

10904 712 TRANSPORT AND ECONOMIC DEVELOPMENT

Course objective

With their investment in transport infrastructure, governments are invariably confronted with a complex and multi-faceted economic problem. Firstly, there is the *scarcity aspect*: a multitude of (and often very extensive) transport needs have to be met with limited means. Secondly, there is a *problem of choice*: a choice must be made between different forms and modes of transport in order to maximise social utility. Thirdly, maximum satisfaction of needs depends on *effective* transport activities and infrastructure. In this module the supporting economic theory and evaluation methods are discussed and applied to equip prospective transport economists with the ability to contribute towards alleviating the above-mentioned problem.

Course content

A: Road economics

- Road user costs
- Road supply costs and financing
- Road cost responsibility
- Cost recovery methods
- Road user benefits, non-road user benefits and external costs
- Multiplier analysis

B: Economic evaluation and selection of government transport projects

- Benefit-cost analysis (theory and application)
- Discounted cash flow techniques
- Derivation of the social discount rate
- Opportunity cost and shadow pricing
- Project selection
- Strategies to promote either economic efficiency or social equity
- Timing of project implementation

Remarks

1. The module is presented during the first semester.
2. The module counts 15 credits.
3. The module is compulsory for the honours program in Transport Economics.
4. Transport Economics 318 and 348 are pass prerequisites for this module.

MODULE 8

11275 742 AIR TRANSPORT ECONOMICS

Course objective

The air transport industry is complex and dynamic and subject to rapid change and innovation. With the introduction of deregulation it has become imperative to take cognisance of new business practices and management concepts. The module will, firstly, provide a basis for the student to enter the air transport industry at (junior) management level, and secondly to introduce students to managerial strategies used in competitive industries within and outside of air transport.

Course content

1. Economics and strategy in aviation, with reference to the role of aviation in the value chain.
2. Air traffic and the role of demand, market segmentation and demand forecasting.
3. Yield in aviation – the aspect of pricing, market segmentation and tariff structures that impact yield.
4. Output in aviation – determinants of output and restraints on utilization and capacity management options.
5. Unit costs in aviation – determining and management of cost.
6. Capacity management – decisions on design of networks, markets, routes, hub-and-spoke systems, alliances and the influence of scheduling on air transport cost.
7. Fleet management – aircraft acquisition and financing tactical utilization of aircraft capacity.
8. Revenue management – function of revenue management, actions taken and various approaches used.
9. Operating performance – relationship between unit costs, unit revenue, yield and load factors.

Remarks

1. This module is offered during the second semester.
2. This module counts 15 credits.
3. Transport Economics 318 and 348 are pass prerequisites for this module.

MODULE 13

59102 715 COMPETITION AND REGULATION

Course objective

Although the South African economy is largely based on free market principles, and most government transport enterprises have either been corporatised or privatised, there is still a need to economically regulate certain aspects which relate to the supply of transport services. The module strives towards making students confident in working with the economic principles of transport regulation, transport pricing, transport competition and government transport policy. Thorough knowledge of these aspects, and the insight to execute transport policy and regulations judiciously, should contribute towards the transport industry supporting the national economy most effectively.

Course content

1. Economic principles of regulation and coordination
2. Market characteristics and phenomena: market forms and market contestability, modal cost structures, horizontal and vertical integration and opportunities for the attainment of economies of scale, long-haul, scope and density
3. Market failures, limitations and problems: public goods externalities, the so-called natural monopoly, incomplete/insufficient user perception, indivisibilities and predatory pricing
4. Regulatory failures, limitations and problems; deregulation, corporatisation and privatisation; and self-regulation
5. Control of market entry
6. Principles of price regulation and concomitant problems with respect to: operating expenses, service quality, capital investment, return on capital, depreciation and measures of effectiveness
7. Price-fixing under conditions of regulation: marginal cost pricing (short and long run), price discrimination, the treatment of common and joint costs and the influence of varying demand on price-fixing
8. The place and role of the common carrier in developing and industrial economies, and the vulnerability of the common carrier to ruinous competition and cream skimming
9. The determinants, goals and objectives of government transport policy

Remarks

1. The module is presented during the first semester.
2. The module counts 15 credits.
3. This module is compulsory for students following the honours program in Transport Economics.
4. Transport Economics 318 and 348 or Economics 318, 348 are pass prerequisites for this module.

MODULE 17

59145 744 ROAD TRANSPORT MANAGEMENT

Course objective

The road transport industry is highly competitive. Therefore it is imperative to have a thorough understanding of the appropriate management aspects in transport operations. In this module a selection of topics relevant to strategic, tactical and operations management are covered which are essential for successfully running a road transport firm.

Course content

1. The role of road freight transport in the logistical chain
2. Detailed vehicle costing and control
3. Financial aspects of vehicle purchasing, management and replacement
4. Client service and marketing of the transport product
5. Analysis of current road transport legislation

Remarks

1. This module is offered during the first semester.
2. This module counts 15 credits.
3. Logistics Management 244 and/or Transport Economics 318 and 348 is a pass prerequisite for this module.

MODULE 21

59153 742 URBAN TRANSPORT ECONOMICS

Course objective

The South African economy is largely dependent on the production of goods and services, and commercial activities in the metropolitan areas. These activities cannot be efficiently carried out without an effective urban transport system. In this module the economic aspects of urban transport are explained and analysed. The knowledge thus obtained is important for urban planners, administrators, transport economists and a career in applied economics.

Course content

1. The relationship between urban land use and transport provision
2. The urban transport problem and proposed solutions
3. The urban transport planning process
4. Urban transport systems and technology
5. Societal trends and the sharing economy
6. Pricing and subsidies
7. Urban transport policy and legislation in South Africa

Remarks

1. The module is presented during the second semester.
2. The module counts 15 credits.
3. This module is compulsory for students following the honours program in Transport Economics.
4. Transport Economics 318 and 348 are pass prerequisites for this module.

MODULE 34

12995 773 SHIPPING ECONOMICS

Course Objectives

Almost 90 per cent of the volume of international trade is seaborne. The globalisation of economic activities has led to fierce competition, resulting in lower freight rates to which the shipping business has had to adapt. This module focuses on the demand for shipping, with specific reference to South African imports and exports, as well as on the supply of shipping and the changes in the behaviour of shipping markets.

Course content

1. The main features of the ship
2. Ship design, construction & operation
3. Types of ships around the globe (cargoes, trades and future trends)
4. Maritime canals, inland waterways & sea ports
5. Liner conferences & charter parties
6. Containerisation
7. Ship financing, management & governance

Remarks

1. This module is presented during the first semester.
2. The module counts 15 credits.
3. Transport Economics 318 and 348 are pass prerequisites for this module

MODULE 41

13076 744 INTERNATIONAL TRADE, TRANSPORT INFRASTRUCTURE AND LOGISTICS

Course objective

The growth of the South African economy is dependent on the current and future trade of resources with neighbouring and international countries. This entails the import and export of various commodities including human capital based on sound theoretical principles in political environments that is cost effective. This module focusses on various topics relevant to the export and import trade market, the optimal transport infrastructure to be used for these trade activities including the correct logistical processes to be undertaken.

Course content

1. Introduction to International trade and trade theories
2. Trade in the Global Economy
3. Trade economics
4. International Ocean Transportation
5. International Air Transportation
6. International Land and multimodal Transportation
7. International Logistics Functions and Intermediaries
8. Terms of sale and payment
9. Documentation and insurance

Remarks

1. This module is offered during the second semester.
2. This module counts 15 credits.
3. Logistics Management 214, 244 or Transport Economics 214, 244 are pass prerequisites for this module.

MODULE 42

13470 711 RAIL ECONOMICS

Course Objective

The importance of effective and efficient Rail Transport to move people and goods within countries and across borders, are often underestimated. By providing this service, Rail Transport contributes to a country's economic growth and development, especially when it comes to transporting bulk freight and a large number of people. In this module, the focus is on analysing the relationship between Rail and economic growth and development, as well as the factors that influence that relationship, from a macroeconomic point of view. The aspects of legislation and regulation, as well as competition structures or market structures are comprehensively covered. The impact of Rail Transport on land use and urban development, as well as ownership structures and best-practice operating models are discussed and applied in a South African context.

Course Content

1. Railway economics and regulation
2. Railway market structures and competition
3. The factors influencing demand and demand forecasting
4. The factors influencing supply – the cost of supply, economies of scale, scope and utilization
5. Management structures and commercialization of railways
6. The South African rail industry, regulation, competition and ownership
7. Best-practice railway ownership structures and operations
8. Public-private partnerships in the railway industry
9. The relationship between rail and land use

Remarks

1. The module is presented in the second semester.
2. The module counts 15 credits.
3. Transport Economics 318, 348 is a pass prerequisite for this module.