

**DEPARTMENT OF LOGISTICS
UNIVERSITY OF STELLENBOSCH**

**POSTGRADUATE INFORMATION:
TRANSPORT ECONOMICS
2022**

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MODULE 4

13473 711 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. Understand the relationship between transport and economic development and understand how, when, why and to what extent transport infrastructure influences the economy.

The outcomes of this module are to:

- Understand the relationship between transport welfare and GDP appraisal metrics
- Understand the concept of economic investment decision making and the use of economic evaluation analysis;
- Use principles of economic investment decision making to select projects which generate maximum welfare; and
- Apply appropriate analytical methods to ensure that transport authorities are able to make the most economically justified decisions taking into account equity and equality

The course will equip students with the necessary theoretical understanding of the impact of transport investment on business and the economy. Students should note that the module combines theory with empirical data with a quantitative foundation

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.*
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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 first semester.
 2. This module counts 15 credits.
 3. Transport Economics 318 and 348 are pass prerequisites for this module.
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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 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 or Economics 318, 348 are pass prerequisites for this module.
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MODULE 17

59145 744 ROAD TRANSPORT MANAGEMENT

Course objective

The module is concerned with providing the student with a practical overview of the functions of freight and passenger transport management and recommend practices that can ensure efficiency, quality and effective delivery of service to customers. The purpose of this module is to enable students to comprehend the integrated nature of transport management so that they can contribute to the implementation of sound transport management principles in a transport environment. 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. These core components of learning include knowledge of transport logistics, routing and scheduling, basic principles of road transport management and occupational health, safety and environmental protection that is applied in operating successfully in a road transport logistics environment.

Course content

1. The Logistics Network in South Africa
2. Legislation in road transport
3. Operations and Planning
4. Load Compiling Systems
5. Controlling the Fleet
6. Monitoring Fleet Performance
7. Costs and Expenditures
8. Cost Accounting System

Remarks

1. This module is offered during the first semester, and is presented on a Hybrid-platform of face-to-face and online lectures and interaction.
 2. This module counts 15 credits.
 3. Logistics Management 244 and/or Transport Economics 318 and 348 is a pass prerequisite for this module.
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MODULE 21

59153 742 URBAN AND REGIONAL 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. The urban transport investment decision
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, 348 is pass prerequisite for this module.
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MODULE 34

14024 773 MARITIME 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, the economies of shipbuilding and scrapping
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
8. The blue economy

Remarks

1. This module is presented during the second 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 and Trade in the Global Economy
2. Evolution of Trade Theories
3. Import Tariffs, quotas and export subsidies
4. International Infrastructure + Ocean Transportation
5. International Air Transportation
6. International Land and multimodal Transportation
7. International Terms of sale and payment
8. International trade documentation
9. Custom Clearance

Remarks

1. This module is offered during the second semester.
 2. This module counts 15 credits.
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