DEPARTMENT OF LOGISTICS

STELLENBOSCH UNIVERSITY

POSTGRADUATE DIPLOMA:

TRANSPORT AND LOGISTICS

2025

Enquiries: Mr Jacquin Flandorp

Tel: 021 808 3911

E-mail: jacquin@sun.ac.za

Website: http://www.sun.ac.za/logistics

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POST GRADUATE DIPLOMA IN TRANSPORT AND LOGISTICS: MODULES

<u>Anchor programme:</u> PGDip (Transport and Logistics)

Programme module

Code	Module	Credits	Module Name
13760	778	120	Transport and Logistics Studies

All students must register for and pass a total of at least 8 modules (for a total of 120 credits). Depending on the undergraduate background, the number of compulsory and elective modules will differ. The tables below outline the compulsory modules per student profile listed above, as well as the elective modules that can be followed in both the Logistics and Supply Chain (LSCM) Management and Transport Economics focus areas.

COMPULSORY MODULES FOR 2025					
Module acronym	Module name	Code	Semester	Lecturer(s)	Credits
Intr_LM	Intro to Logistics Management	13475 711	1	Ms Ulrike Kussing	15
Intr_TE	Intro to Transport Economics	13474 711	1	Mr Reginald Kgwedi	15
Road_TM	Road Transport Management	59145 744	1	Dr Johann van Rensburg & Dr Gculi Khumalo	15
SM	Supply Management	11480 771	1.2 & 2.1	Ms Chuma Lalendle & tbc	15
Cust.S&L	Customer Service and Logistics Interface Management	11485 722	2	Ms Anneke de Bod	15
CS_LM	Capita Selecta (Logistics Management) – Humanitarian Logistics	11571 771	2	Ms Ulrike Kussing (coordinator) Lecturers from LEARN Logistics (Kuehne Foundation), Germany	15
ITTL	International Trade Transport Infrastructure and Logistics	13076 744	2	Dr Johann van Rensburg	15

QUANTITATIVE ELECTIVE MODULES FOR 2025*					
Module acronym	Module name	Code	Semester	Lecturer	Credits
An.T&T.	Analysis Tools and Techniques	13477 711	1	Prof. Hannelie Nel	15
Intr_Forc.	Introduction to Forecasting	10911 723	1	Mr Heinri Freiboth & Prof. Johan Louw	15

* Must choose one of these modules, depending on previous quantitative background. Please consult Ms Ulrike Kussing before making your final choice.

DETAILED MODULES

13475 711   Introduction to Logistics Management (*Intr_LM***)**

Course objective

The student should be able to describe the basic functioning of a logistics channel. It is important to identify, illustrate and appreciate the contribution of all the major activities involved in logistics. The student should be able to articulate the major differences between the inbound and outbound logistics systems.

Course content

1.   Introduction to Logistics & Supply Chain Management
2.   Dimensions of Logistics
3.   The Inbound Logistics System
4.   The Outbound Logistics System
5.   Major Activities involved in Logistics (Inventory, Transport, Storage, Packaging, Handling, etc.)

Remarks

- This module is presented during the first semester.
- The module counts 15 credits.
- This module is offered residentially only.

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13474 711 Introduction to Transport Economics (*Intr_TE*)

Course objective

Transportation plays a critical role in the economic development of societies. In many instances, countries with well- developed transport industries and infrastructures have seen faster rates of economic development and have become highly competitive in the global market. Therefore, it is imperative that those involved in the operational, tactical and strategic sectors of the transport industry possess a thorough background of appropriate knowledge required to achieve the benefits associated with transportation. In this module a selection of topics relevant to the functions of transport, elements of transport demand, infrastructure provision, sustainable transport and technology, transport policy and regulation, modal cost structures and the economic evaluation of transport projects will be covered.

Course Content

CHAPTER 1: TRANSPORT, ECONOMY, AND SOCIETY
Introduction
The functions of transport
The components of transportation
Transportation and space
The economic characteristics of transport

CHAPTER 2: TRANSPORT SYSTEM AND MODES
The elements of a transport system
Transport modes
Intermodal transportation and modal competition

CHAPTER 3: TRANSPORT PLANNING AND DEMAND ANALYSIS
Transport planning and governance
Transport safety and security
The factors influencing the demand for transport
Transport demand analysis

CHAPTER 4: TRANSPORT AND ECONOMIC EVALUATION
Income distribution aspects
Transport economic project evaluation

CHAPTER 5: URBAN TRANSPORT AND INNOVATION
Transportation and the urban form
Urban land use / urban form and transportation
Urban mobility
The urban transport challenges and solutions
Transport, sustainability, and innovation

Remarks

- The module is presented during the first semester.
- The module carries 15 credits.

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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 South African road network
2.   Planning the transport function
3.   Organising the transport function
4.   Staffing the transport function
5.   Transport operations
6.   Monitoring transport operations
7.   Transport operations costing and reporting
8.   Finance and external relations
9.   Compliance with legislation

Remarks

- This module is offered during the first semester.
- This module counts 15 credits.

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11480 771   SUPPLY MANAGEMENT (*SM*)

Course objective

It is important for a business to analyse logistics processes and to focus on streamlining the processes. The business should consider practises to minimise logistics environmental impact and waste. Aspects such as warehousing, packaging and materials handling activities should be considered. Product delivery through transport service providers should be coordinated.

Course content

1.   Global procurement and sourcing
2.   Supplier management
3.   In-house and outsourced production operations and supply chain execution
4.   Warehousing
5.   Materials handling
6.   Packaging
7.   Transportation (inbound and outbound)
8.   Reverse logistics

Remarks

- This module is presented during the second and third terms.
- The module counts 15 credits.

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11485 722   CUSTOMER SERVICE AND LOGISTICS INTERFACE MANAGEMENT

Course objective

The ultimate effect of logistics and supply chain activities / processes should meet the targeted customer requirements. Managing the interface between sales and logistics is of vital importance. Balancing the performance-related and cost-related targets remains a challenge.

Customer service is the source of customer information. It also provides the customer with real-time information on scheduling and product availability through interfaces with the company's production and distribution operations. Customer service is also a process for providing significant value-added benefits to the supply chain in a cost-effective way.

Course content

1.   Introduction to Customer Service and Logistics Interface Management
2.   Customer service dimensions and measurement
3.   Customer Service's role in demand management
4.   Customer Service strategy development
5.   Customer service performance management
6.   The customer service and customer relationship process across the value chain
7.   Reverse marketing or Supplier Development

Remarks

- The module is presented during the second semester.
- The module counts 15 credits.
- The module is offered residentially only.

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11571 771   CAPITA SELECTA (Logistics Management) – Humanitarian Logistics (*CS_LM*)

Course objective

Most of the supply chains that students encounter during their studies, are focused on the provision of products by organisations/companies that do so with a profit objective. This is traditionally referred to as business logistics. Profit is, however, not always the purpose of a supply chain. In the case of humanitarian need, the purpose of supply chains is to meet the end beneficiary's requirements, be that shelter, food, water, etc.

This module will introduce students to the humanitarian environment (principles, stakeholder and structures), and demonstrate how different logistics functions are applied in a relief context. Students will get a chance to see humanitarian logistics in action, and will apply their previous knowledge of logistics and supply chain management to the humanitarian context.

Course content

1. Introduction to the humanitarian environment
2. Disaster & Emergency operations context
3. SCM in Relief Logistics
4. Sustainability & Risk Management
5. Excursion to Humanitarian Organisation in Cape Town

Remarks

- The module is presented during the second semester.
- The module counts 15 credits.
- Prerequisite: Sufficient background in Logistics and Supply Chain Management (either as an undergraduate major, or successful completion of the PGDipl's Introduction to Logistics Management module).
- The module is offered residentially only.

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13076 744   INTERNATIONAL TRADE, TRANSPORT INFRASTRUCTURE AND LOGISTICS (*ITTL***)**

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 are cost effective. This module focusses on various topics relevant to the export and import trade market and 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
5.   Ocean Transportation
6.   International Air Transportation
7.   International Land and multimodal Transportation
8.   International Terms of sale and payment
9.   International trade documentation
10. Custom Clearance

Remarks

- The module is presented in the second semester.
- This module counts 15 credits.

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13477 711   ANALYSIS TOOLS AND TECHNIQUES (*An.T&T.***)**

Course objective

The increasing availability of data and computational power, combined with the general tendency of managers to base decisions on proper analysis of data, increases the demand for employees with analytical skills. This course aims to introduce students to analytical tools and techniques to be able to solve basic problems as well as recognise the opportunities for improvements in the operational environment, through the application of the learnt knowledge and skills or by related but more advanced techniques.

Course content

1.   Business mathematics and Excel
2.   Linear programming
3.   Network modelling
4.   Queueing Theory
5.   Simulation

Remarks

- This module is presented during the first semester.
- The module counts 15 credits.
- This module is offered residentially only.
- This module is compulsory for students with NO previous (3rd year) qualifications or exposure to Quantitative Management or Business Analytics.
- This module cannot be taken by students that had LSCM344 or Business Analytics as a major for their undergraduate degree.

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10911 723   INTRODUCTION TO FORECASTING (*Intr_Forc.***)**

Course objective

Customers and business organisations are increasingly generating data – massive amounts of data. At the same time, we have seen increases in computer processing power that allows us to connect to, clean, structure and analyse large data sets with relative ease. This holds exciting possibilities from economic and management perspectives, if we can utilise this data to search for trends, patterns, and relationships, to make better decisions and plan for the future.

The aim of this module is to familiarise you with the data analytics process, specifically focussing on real-world data from the supply chain, logistics and transportation disciplines. Not necessarily "big data", but hopefully larger datasets than you would have dealt with during your undergraduate studies. You will also learn how to use suitable software packages to clean datasets and to perform appropriate analysis on the data, whether it is descriptive, diagnostic, or predictive analysis, and ultimately interpret and share the results in appropriate ways.

Course content:

1.   Statistics and data, data types, data classification, data analytics process
2.   Data collection, -connection, -preparation, and -exploration
3.   Descriptive techniques (numerical and graphical)
4.   Diagnostic techniques (hypothesis testing, correlation- and regression analysis)
5.   Predictive techniques (time series analyses and forecasting)
6.   Communicating results

Remarks

- The module is presented during the first semester.
- The module carries 15 credits.
- This module is available to residential students only.

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