

# DEPARTMENT OF TRANSPORT AND COMMUNITY SAFETY

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#### A. INTRODUCTION

50 years ago travelling from Africa to Europe by ship could take several weeks. Sending mail was done by bicycle or on horseback and could easily take weeks or months, because there were no proper infrastructures in place. Before the major technical transformations brought forward by the industrial revolution at the end of the 18th century, no forms of motorized transportation existed.

Transport plays a facilitating role in the global economy and it holds a central role in driving the social and economic developments of any country. It furthermore facilitates economic development and growth as well as social activities through movement, bringing people and goods together.

The demand for transport is a derived demand, fulfilling the demand for mobility of goods or passengers.

# 2. THE IMPORTANCE OF TRANSPORTATION

Transport creates valuable links between regions and economic activities, between people and the rest of the world.

Transport is a multidimensional activity and its importance lies in:

**History:** Transport modes have played several different facilitative historical roles in the rise of civilization.

**Social:** Transport modes facilitate access to healthcare, welfare, and cultural or artistic events, thus performing a social service.

**Political:** The Government plays a critical role in the provision of transport and infrastructure to the public.

**Environmental:** Decisions relating to transport need to be evaluated taking into account the corresponding environmental impact.

**Economic:** No economy can function without the existence of a proper transport system.

# 3. OVERVIEW OF THE DEPARTMENT OF TRANSPORT

By providing fully integrated transport operations and infrastructure, the Department of Transport is responsible for maximising the contribution of transport to the economic and social development goals of society.

It ensures provision of safe, affordable, sustainable and integrated transport services by means of a transport system that responds to the demands and challenges of the economic growth internally and externally.

#### **Vision**

"A pioneering and leading department at the epicentre of socio –economic development

#### Mission

"To provide safe, affordable, sustainable and integrated transport services

#### **Values**

The core values of the Department are to:

- Integrity
- Transparency
- Accountability
- Consistency
- > Trust and Respect

It is critical to mention that all organizations within the transport sector are therefore required to align themselves with these department's strategic priorities since it is the key driver of transportation operating at national level

# 4. THE BENEFITS OF THIS BOOKLET

The booklet offers insight to the public, learners and educators about the Transportation industry, careers and possible study opportunities in the transport fraternity. Furthermore, to guide those interested to access financial assistance through various avenues including the Centres of Development (tertiary institutions funded by the department of transport to build human and research capacity), to understand and have access to information on procedures, what study fields could be pursued in which institutions as well as various entry requirements needed. Furthermore, the booklet is also aimed at drawing attention towards the scarce and critical skills that the sector largely requires which should guide prospective employees about the high priority future employment demand.

Who should read this booklet?

- Grade 9 learners before making career and subject choices
- > Grade 12 learners before applying for tertiary learning and assistance in funding
- Any person who would like to pursue a career in the transport environment

#### 5. CAREERS IN TRANSPORT

Studies in the majority of careers in the transport industry can be sourced from a number of accredited service providers. Due to the technical nature of the content of the job, the person would be required to master a number of these to have one or more entry requirements. The relevant institution of learning, colleges or private service providers would be able to supply relevant and up to date information in this regard.

When careers in transport are discussed, it is prudent to differentiate between the different modes of transport. They fall into one of the three basic types, depending on type of surface travelled on land (road, rail and pipelines), water (maritime shipping), and air (aviation).

# 5.1 Land / public Transport

It is a means of transportation of small and large numbers of people and goods on land through road and rail and the achieving of economy scale. Public transport includes modes such as buses, trains, and taxis. Normally this mode of transportation is associated with Land or Road transport.

### 5.1.1 The Bus Transport Industry

The bus industry is associated for the purpose of conveying a large number of passengers for economic and social activities. Bus drivers operate on a regular time schedule. This mode of transport travels on land or road.



The following careers are available but not limited to:

- Fleet Managers
- Engineers
- Coach Operators / Bus Drivers
- Transport Managers
- A career in tourism
- Road traffic safety Management

Buses require a code 14 driver's licence. Various learnerships through the Transport Seta (TETA) and academic studies through various colleges and institutions of higher learning have been indicated in the document.

# 5.1.2 The Taxi Industry



The taxi industry transports in excess of 65% of commuters in South Africa every day. The industry is associated with the transportation of passengers for reward in vehicles other than buses and includes the control and management of such vehicles.

The following careers are available but not limited to:

- Taxi operators / owners
- Management positions in Taxi associations
- Taxi Drivers
- Transport management
- Ancillary services (maintenance, operational management etc)
- Road traffic safety management

Light motor vehicles require code 08 and 10 driver's licence. Various learnerships through the Transport Seta (TETA) are also available.

#### 5.2 The Freight transport industry



The trucking industry moves freight from the point of departure to the point of destination, albeit to and from airports, rail, road, and water terminals, pipelines to the distribution centres to petrol stations or as an ancillary function within a company, secondary to that of their core business.

The Freight services are companies that transport goods for reward or for their own purposes. These include: Bulk transport carriers, Retail Fleets, Removal companies and Courier companies and also a large component of other businesses transporting their own merchandise.

The following careers are available (but not limited to):

- Fleet controller / Managers
- Dispatchers
- Packers and Loaders
- Truck Drivers
- Moving and Lifting Operators

Heavy motor vehicle requires code 10, 11 and 14 licences depending on the carriage. Various learnerships through the Transport Seta (TETA) and academic studies through various colleges and institutions of higher learning have been indicated in the document.

# 5.2.1 Freight handling industry

This section of the industry deals with the physical handling of the freight in transit. It includes amongst others storage and stock control of freight/cargo through ports, airports, distribution centres etc.

The following are some of the careers available in the freight industry:

- Courier services
- Specialist supply chain management services
- Warehouse Manager
- Distribution Manager
- Logistics Manager
- Terminal Manager

Various learnerships through the Transport Seta (TETA) and academic studies through various colleges and institutions of higher learning have been indicated in the document.

#### 5.2.2 Forward and Clearing



The industry is responsible for the forwarding of freight through the different required steps to move it internationally. It includes the management of international aspects of procurement acquisition, movement and storage of materials, parts and finishes inventory into, through and out of

organisations and its distribution channels and therefore, uses the services provided by all the modes of transport.

Various learnerships through the Transport Seta (TETA) and academic studies through various colleges and institutions of higher learning have been indicated in the document.

### 5.2.3 Pipeline

Pipeline transport is a transportation of goods through a pipe, either gas or oil. Oil and gas pipelines represent one of the most important assets for the economic and social development of almost any country. The careers in the pipeline environment include pipeline construction, pipeline engineering and project management.

#### 5.3 THE RAIL TRANSPORT INDUSTRY

The Rail industry is involved in the transportation of goods, passengers and life-stock by rail. Furthermore, it is also involved in the control, management, maintenance of trains and train tracks. The Rail industry is divided into different fields and areas of specialisation, such as Technical, Operations and Management.



The following is an indication of some of the available careers (but not limited to):

#### 5.3.1 Station Operations

Monitor and manages the rail services. The station operators are involved in the protection of assets and revenue, sale of tickets and the verification of tickets of commuters.

#### 5.3.2 Train operations

There is a host of careers relating to the train operations, which includes the movement of trains. The industry employs train drivers, guards, train control officers and train shunting personnel.

#### 5.3.3 Other careers in rail are:

- Rail Engineers (Electrical, mechanical civil and signalling)
- Rail Management
- Yacht officials

- Train Controllers
- Artisans
- Co-coordinator, centralized traffic control
- Examiner and repairer (Wagon Maintenance)
- Flagman Lamp man
- Locomotive attendant
- Maintainer (signals)
- Maintenance assistant (carriage and wagon)
- Train driver

Various learnerships through the Transport Seta (TETA) are available and academic studies through various centres of development are offered (refer to institutions of higher learning).

# 5.4 THE MARITIME INDUSTRY

Maritime industry is associated with activities on all vessels used at sea, and the associated land based services. The maritime routes are composed of oceans, coasts, seas, lakes, rivers and channels.



The Maritime field offers a wide choice of career opportunities, many of which are international by nature. The following is an indication of maritime careers but not limited to:

# 5.4.1 Marine and Ship Engineers

The Ship Engineers are involved with the maintenance of the engine of a ship, they do repairs and advise the master where necessary i.e. take care of all engineering related needs of a ship.

The Cape Peninsula University of Technology and The Durban University of Technology are the only tertiary level institutions that offer all required marine engineering subjects.

#### 5.4.2 Crewmember

A crewmember's career can lead from Deck Officer to Captain.

#### 5.4.3 Deck Officers

Deck Officers are required to navigate the ship safely and efficiently as well as ensure that cargo is stowed correctly.

#### **5.4.4** Other careers in Maritime are:

- Maritime Lawyers
- Tug Masters
- Marine Pilots
- Harbour Masters
- Caterers
- Ship Surveyors
- Maritime Environmentalist (Sea Pollution)

Various learnerships through the Transport Seta (TETA) are available and academic studies through various centres of development are offered (refer to institutions of higher learning).

#### 5.5 AIR TRANSPORT (AVIATION) INDUSTRY



The aviation industry is associated with the air transport sector; it deals with the transportation of passengers, freight and mail by air. Goods and passenger use this mode of travelling to different destinations be it domestic or international. The Air transport profession is also regarded as critical and scarce skill in SA.

The following are careers available in aviation but not limited to the following:

#### 5.5.1 Pilot

To be a pilot can be an exciting and challenging prospect to people with a passion for flying an aircraft. The pilot is ultimately in control of an aircraft in a crew of more than one. There are different types of pilots such as helicopter, commercial and private. The difference is determined by the number of hours each has to fly. For example a private pilot needs to fly at least a minimum of 40-60 hours while a commercial pilot needs to build up 200 hours. A maximum of at least 1500m is therefore required for becoming a fully trained pilot. The Helicopter Pilot must undergo the complete wings training course on fixed- wing air.

#### 5.5.2. Air Traffic Controller



The complexity of today's air traffic requires highly trained staff. This includes tower control - which handles all aircraft ground movements, take- offs and landings and approach control - which monitors approaching and departing traffic as well as area control - which monitors traffic that is en-route.

At airports, control is largely visual and in congested areas is also supported by radar and other electronic equipment plays a major role. The Air Traffic Controller (ATC) is in constant communication with pilots ensuring a safe, orderly and expeditious flow of air traffic. ATNS also offers learnerships to candidates who are interested in becoming engineering technicians.

Bursaries are offered to students that are interested in pursuing a career in Air Traffic Control, Electrical and Electronics Engineering.

## 5.5.3 Avoinicians and flight inspectors



An Avoinician carries out calibration from the air, to prove that the systems are accurate. Periodic checks are required from the ground and in the air to make sure that the systems function normally.

# 5.5.4 Aeronautical Engineer: Critical and scarce skill.

Aeronautic engineers develop, design and test aircraft, missiles, satellites and space vehicles.

#### Other careers in Aviation

- Aviation Safety Promotion Officer
- Aeronautical Documentation Specialist
- Airports Management
- Air Traffic Flow Specialist
- Air traffic Service Assistant
- Airspace modelling and Simulation Specialist
- Avoinicians and Flight Inspectors
- Aeronautical Engineering
- Aeronautical Information Clerks
- Aviation Administration, Legislation and Enforcement
- Aviation Law
- Aviation Medicine
- Ancillary Services
- Communication Services
- Design and Construction
- Display System Specialist
- Ground Handling and Ground Attendants
- Human Factor Specialist
- > Flight Dispatcher
- > Flight Attendant
- Flight Procedure Specialist
- Software Specialist
- Weather Services

#### **Aviation maintenance**

- Aircraft Avionican
- Aircraft Electrician
- Aircraft Radiaotrician
- Aircraft Instrument Mechanics
- Aircraft Mechanic
- Aircraft Structures Worker
- Aircraft Welder

- Electrician
- Electronics Mechanics
- Fitter and Turner

#### 5.6 Search and Rescue

Search and rescue is a life-saving vocation. The ability to save a life is often dependent upon how quickly the person can be found and accessed. Response to persons in distress has long been an honourable, charitable tradition. The professionals in search and rescue have carried on this tradition of helping others by dedicating time, information, skills, equipment and funding to the relief of those in need.

#### 5.6.1 Other careers in search and rescue

- > SAR mission coordinator
- Assistant SAR mission coordinator

#### 5.7 CROSS CUTTING CAREERS IN TRANSPORT

#### 5.7.1 Management

The management is involved in Project Management, Operations, Finance, HR, IT, Marketing, Risks, and Transport Economists, Contract Management, Road Maintenance Management, Environmental Analysis and Budget control.

#### 5.7.2 Administrative Functions

Generally within the support functions for Purchasing, Human Resources, Finance, etc.

#### 5.7.3 Engineering

The engineers are drawn from the following fields: - civil, electrical, mechanical, signaling, project engineer, pavement specialist, architecture, surveying, quantity surveying, town and regional planning, construction management, artisans, bridge specialist, geotechnical specialist, road safety specialist and environmental specialist.

#### **5.7.4 Transport Economists**

These people study the efficiency, financial organisation and interaction of systems such as railways, air transport, shipping, trucks, buses and cars. They examine the allocation of private and government resources to transport systems and the implications of fuel production and importation.

#### 6. LEARNERSHIPS

Learnerships are based on legally binding agreements between the employer, the learner and the training provider. They combine theory and practice (structured learning) and culminate in a qualification that is registered on the National Qualification Framework (NQF). Basically this is to ensure that quality of training is protected. The success of a learnership is determined at the end of the programme if the learner can practically use the skills that she/he has been taught. The learnership constitutes at least 70% of practical learning and 30% of theoretical learning. Learnerships are developed by subject experts and put on different NQF level bands. In line with the level descriptors, qualifications and unit standards are registered at the specified level of the NQF with a number of credits allocated to it. This means that a learner could accumulate credits for successful completed unit standards towards a qualification making learning more flexible to meet learner needs

#### **APPRENTICESHIP**

Apprenticeship is a technical training system that includes practical and theoretical training offered in designated trades, the person qualifies as an artisan. The duration of the apprenticeship programme is determined by each trade and level.

# 7. SAQA LEVELS, DESCRIPTION AND EDUCATION BANDS

NQF	BAND	QUALIFICATION TYPE				
LEVEL						
8		Post-doctoral	research	degrees,		
		Doctorates, Masters degrees				
7	HIGqQHER	Professional	Qualifications,	Honours		
	EDUCATION	degrees				

6		AND TRAINING	National first degrees, Higher diplomas				
5			National diplomas, National certificates				
FU	IRTHEF	R EDUCATION AND	TRAINING CERTIFICATE				
4		FURTHER	National certificates				
3		EDUCATION					
2		AND TRAINING					
GE	NERA	L EDUCATION ANI	D TRAINING CERTIFICATED				
1	GENE	RAL EDUCATION A	AND TRAINING				
	GRADE 9 National Certificate						
	ABET LEVEL 4						

# 8. CURRENT REGISTERED LEARNERSHIPS IN THE TRANSPORT INDUSTRY

# 8.1 Aviation

Careers		Entry	Training providers	Learnerships	Employment	Contact details
		Requirement				
Pilot		Grade 12		National diploma. Aircraft	South African Airways,	www.flysaa.com
		exemption		piloting level 6	South African Air force.	
		Mathematics,		Aircraft piloting level 5	Civil Aviation Authority	www.caa.co.za
		science and				
		Geography				
Air	Traffic	Grade 12, Maths	Aviation Training Academy	Engineering learnerships	Air Traffic and	www.atns.com
Control		and English.			Navigation Service (	
				Acsa bursary programmes	ATNS)	
Air	Traffic	Grade 12, Maths	Aviation Training Academy	ATSA Core Content	Air Traffic and	www.atns.com
Service		and English.			Navigation Service(	
Assistant	:				ATNS)	
Aeronauti	ical	Grade 12, Matric	University of Pretoria,	Advanced National	CSIR (Aerotek)	www.csir.co.za
Engineers	S	exemption with	University of Stellenbosch	Certificate: Aeronautical	Denel Pty (LTD)	
		Maths, Science on	offers postgraduate courses	Engineering: Electrical	Houwteq,	www.denel.co.za
		HG with at least a		Level 4	South African Airways,	www.flyggg.ggm
		c symbol,	University of JHB offers a 4-	Advanced National	South African Air force.	www.flysaa.com
		Computer science	year undergraduate course	Certificate: Aeronautical	Civil Aviation Authority	www.caa.co.za
		would be of		Engineering: Mechanical	ICIO	

	benefit.	University of Tshwane offers	Level 4	ATNS	www.atns.com
		National Diploma in	Aircraft composite	Airports Company South	
		Mechanical Engineering	structures technician level 2	Africa (ACSA).	www.airports.co.za
		(Aeronautics)	Aircraft composite		
			structures technician level 3		
			Aircraft composite		
			structures technician level 4		
			Engineering Technician		
			level 6		
Airports	Grade 12	Airports Company South	Airline Contact Centre	Airports Company South	www.airports.co.za
management	exemptions.	Africa (ACSA) offers courses	Management level 5	Africa (ACSA).	
		in airport management			
Avoinician and	Grade 12 Maths	Tshwane University of	Navigation engineering	Airports Company	www.airports.co.za
Flight inspectors	and Science	Technology/Aviation Training	level 3	South Africa	
		Academy	National cert. Air traffic	(ACSA)./South African	
			support level 5	Airways	
			National diploma. Air traffic		
			control level 6		

# 8.2 Road Transport

Careers	Entry	Training providers	Learnerships	Employment	Contact details
	Requirement				

Civil	Grade 12	University of Johannesburg	National Certificate in	South African	www.sanral.co.za
engineering	exemption with a C	University of Stellenbosch	Information Technology:	National Roads	
Road	symbol,	Deningula University of	End User Computing	Agency Ltd:	www.spoornet.co.za
	mathematics,	Peninsula University of	NQF Level 3	(SANRAL),	www.transnet.co.za
	physical Science	Technology	National Certificate in		www.transnet.co.za
	and English on the	Nelson Mandela Metropolitan	Information Technology:	Spoornet,	www.airports.co.za
	higher grade.	University	Systems Support	Transnet	
			Engineering		www.transport.gov.za
		University of South Africa	NQF Level 5	ACSA and The	
				Department of	
				Transport.	
Town planning	Diploma / Degree		Land transport planning	Spoornet/ Metro rail/	www.transport.gov.za
	in Town and		level 5	South African railway	
	regional planning.		Land transport planning	safety regulatory/	
			level 6	Department of	
				Transport/ SARCC:	
				local government	
Freight services	Grade 12 and	University Of Johannesburg	Freight handling	Spoornet,/ Transnet	www.sanral.co.za
	tertiary		specialist level 3	Metro rail, ACSA and	
	qualification		National cert: freight	The Department of	www.spoornet.co.za
			forwarding level3	Transport	www.transnet.co.za
			Freight forwarding level		
			4		

			Freight forwarding level		www.airports.co.za
			5		
			Freight Handling		www.transport.gov.za
			Logistics level 5		
			Professional Driving		www.metrorail.co.za
			level 3		
			Professional Driving:		
			commuter/ coach /		
			freight services level 3		
			Customs clearance :		
			forwarding and clearing		
			level3		
			Forward and clearing		
			level 4		
Transport	Grade 12 and	University of Stellenbosch	Road Transport	The Department of	www.transport.gov.za
management	tertiary	University of Johannesburg	Management level 3	Transport	
	qualification		FET Cert Road		
			transport management		
			in the public sector level		
			4 FET Cert Road		
			transport supervision		
			GET Cert. Transport		
			Learnership in transport		

			level 1		
			Incident management		
			SARA level 5		
			Incident management:		
			emergency services		
			level5		
			Incident management:		
			fire and rescue level 5		
			Incident management:		
			Traffic Authorities level		
			5		
			FET Cert. Dangerous		
			goods level 4		
			FET Cert: Pipeline		
			operations		
Transport	Mathematics,	University of KZN	National certificate:	The Department of	www.transport.gov.za
economist	Economics,	University of Stellenbosch	international trade level	Transport	
	Business	University of Johannesburg	2		
	Economics and				
	Accounting		National cert. Export		
	B-Tech economic		Administrator level 5		

Careers	Entry Requirement	Training providers	Learnerships	Employment	Contact details
Civil engineering	Diploma/Degree in	University of Pretoria		Spoornet/ Metro rail/	www.spoornet.co.za
in Rail	Civil Engineering	University Of		South African railway	www.sarcc.co.za
		Johannesburg		safety regulatory/	www.transport.gov.za
				Intersite/ Department of	www.metrorail.co.za
				Transport	
Rail Management	Diploma /degree	University of	Rail Operations	Spoornet/ Metro rail/	www.spoornet.co.za
	financial management	Stellenbosch	(functional yard	South African railway	
	Degree in IT Support,	University of	operations) level 3	safety regulatory	www.transnet.co.za
	Degree / Diploma in	Johannesburg	Rail Operations		NAMANA CORCO OO 70
	PR Management /		(Train Control) level	Department of Transport	www.sarcc.co.za
	Communications /		4		www.transport.gov.za
	Marketing. BCom in		Rail transport		
	Transport Economics		passenger services		
			level3		
Electrical	Diploma/Degree in	Durban University of	National Certificate in	Spoornet	www.spoornet.co.za
engineering	Electrical Engineering	Technology	Railway signalling:		www.sarcc.co.za
	(heavy/light current) or	, comiciogy	assembly and wiring	South African railway	www.transport.gov.za
	Signaling/	University of	of equipment level 2	safety regulatory(	www.metrorail.co.za
	Telecommunications	Stellenbosch	National Certificate in	SARCC):	
	(light current)	University of	Railway signalling:	Motro roil	www.transnet.co.za
		Johannesburg	faultfinding and	Metro rail	
			repair equipment		

	level 4 National	Department of Transport	
	Certificate in Railway		
	Signalling:	Transnet	
	Installation and		
	scheduled		
	Maintenance of		
	equipment level 3		
	National certificate:		
	Rail Transport		
	Passenger Services		
	level 3		

# 8.4 Maritime

Careers En	ntry Requirement	Training providers	Learnerships	Employment	Contact details
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Marine and ship	Grade 12 with minimum	Cape Peninsula	National Certificate in	South African Maritime	www.samsa.co.za
engineering	"D" symbol (standard	University of	Navigation and	safety association	
	Grade) in English,	Technology Durban	Engineering level 3	(SAMSA)	
	Mathematics and a	Institute of Technology	National Diploma in		MANAY DD2 CO 72
	Science subject. Or N4		Marine Engineering-	National Ports Authority	www.npa.co.za
	in Mechanical		Mechanical level 6	(NPA) Department of	www.transnet.co.za
	Engineering from a		National Diploma in	Transport	
	Technical College. The		Maritime Studies	Transnet/ Transwerk	
	applicant must be		level 6 Further	Transilet Transwerk	
	physically fit and not		Education and		
	colour blind.		Training Certificate:		
			Shipping level 4		
			General Education		
			and Training		
			Certificate: Transport		
			(fishing) level 1		
			National cert Marine		
			pilot age level 5		
Maritime Lawyer	Diploma in Maritime	University of Cape		South African Maritime	www.samsa.co.za
	Law, Maritime Degree in	Town/ University of		safety association	
	Maritime Law and	KZN / Durban		(SAMSA)	www.npa.co.za
	Master's degree in	University of		National Ports Authority	

	Maritime Studies.	Technology University			(NPA) Department of	
		of Stellenbosch			Transport	
Maritime	Knowledge of ordinary	University of	Maritime	operations	South African Maritime	www.samsa.co.za
Economists	number work is required	Stellenbosch The	level 3		safety association	
	not necessarily Math's.	University of Natal			(SAMSA) National Ports	www.npa.co.za
					Authority (NPA)	
					Department of Transport	
Pipeline	Transport management		Pipeline	operations	South African Maritime	
operations			level_3		safety association	
					(SAMSA) National Ports	
			Pipeline	operations	Authority (NPA)	
			level 6		Department of Transport	

# 9. THE TRANSPORT SECTOR EDUCATION AND TRAINING AUTHORITY (TETA)

The Minister of Labour in accordance with the Skills Development Act, Act No 97 of 1998 formally established the Transport Education and Training Authority (TETA) on 20 March 2000. It was formed on the backbone of five former Industry Training Boards namely, Aerospace, Maritime, Road Freight, Road Passenger and Transnet Training Boards. Currently, the institution comprises of eight chambers that are responsible to drive skills development across all modes.

# 9. 1 The role of transport education and training authority (TETA) to sectors

#### TETA's roles are as follows:

- To assist the sectors to identify skill shortages and training needs.
- Create an environment for growth and development of employees.
- The development and implementation of effective systems for quality assurance and recognition of learner achievement. To encourage the entry and retention of target groups into employment and entrepreneurship.
- To measure the effect of education, training and development on the productivity and profitability of the sector.
- To develop and register learnerships and skills programmes.

The above mentioned organization is the custodian of skills development in the transport sector and has been delegated with the authority to disburse funds in the form of bursaries. However, the respective chambers and employers need to be contacted to have access thereof.

#### 10. TRANSPORT SECTOR IDENTIFIED CRITICAL AND SCARCE SKILLS

SECTOR	FIELDS
Aviation	Pilots, Air Traffic Controllers, Aircraft Maintenance Engineers, Avionics
	Engineers, Aircraft and Avionics Technicians
MARITIME	Ship Master, Ship Engineers, Naval Architects, Marine designers and
	engineers
ROAD	Architects, Surveyors, Planners, Designers

RAIL	Transport Engineers , Civil Engineers (Rail), Electrical and Electronics			
	Engineers, Salvage Engineers, Signalling and mechanical			
	Rail Operations: Functional Yacht Operations			
	Rail Operations: Train Control			
	Railway Track Maintenance			
	Rail Management			
	Rail Technicians			
Automotive	Transport electrical and Mechanical Engineering Technicians, Motor			
Electricians &	Mechanics			
Mechanics				
Transport	Production/Operations Managers , Freight Manager, Transport Managers,			
Managers	Transport Operations/Owner Manager, Supply and Distribution Managers,			
	Technical Projects & Contract Managers, Human Resources Managers,			
	Small Business Managers, Corporate Service Managers (Admin and			
	Corporate General Managers including Senior Managers			

# 11. CENTRES OF DEVELOPMENT

The National Department of Transport established the Centres of Development (tertiary institutions providing transport related studies) in the 1990's. The aims of the centres are to build human and research capacity in the transport field, to offer qualifications at undergraduate level and postgraduate level. The centres have been demarcated into three regions namely, Eastern, Northern and Southern Regions.

# 11.1 EASTERN CENTRE

The Eastern Centre constitutes of the following institutions of higher learning: Durban institute of Technology, University of Kwazulu Natal and also Durban-Westville University.

# 11.1.1 INSTITUTIONS AND FIELD OF STUDY

UNIVERSITY OF KZN	King Edward Avenue Scottsville
Bachelor of Science in Engineering	Pietermaritzburg
Diploma in Maritime Law and Practice	Private Bag X01 Scottsville , 3209
Master of Business Administration in	Tel: +27(0)33 260-5212
Maritime	Howard College Campus: King George ∨
Transport Economics and Management	Avenue, Glenwood
Masters of Commerce in Maritime	University of KZN Durban

Masters of Laws in Maritime Law

4041
031 260-2212

Westville Campus: University Road

Westville

Private Bag X 54001

Durban
4000

Tel:+27(0)31260-7111

Edgewood Campus: Cnr. Richmond &

Marianhill Rd, Pinetown

Private Bag X03 Ashwood
3605

Tel: +27(0)31 260-3414

Website:www.ukzn.ac.za

**DURBAN UNIVERSITY OF TECHNOLOGY** 

N Dip : Maritime Studies
N H Dip: Maritime Studies
N Cert: Maritime Studies

N Dip: Maritime Engineering N Dip: Engineering: Civil

B Tech: Engineering: Civil

City campus

Steve Biko campus ML Sultan campus Ritson campus

Briekfield campus Indumiso campus Riverside campus

For more information contact: The

Department of Engineering Science and the built environment, Contact: 031 204 2717

Website:www.dut.ac.za

#### **11.2 NORTHERN CENTRE**

The Northern centres constitutes of the following institutions of higher learning: University of Pretoria, University of Potchefstroom, UNISA, University of Johannesburg.

# 11.2.1 INSTITUTIONS AND FIELDS OF STUDY

#### **UNIVERSITY OF PRETORIA**

Transportation Engineering

BEng(Hons)(Transportation Engineering)

BSc Hons (Applied Science)

MEng (Transportation Engineering) MSc

(Applied Science)PhD Transport studies

# For more information write to the University of Pretoria:

Department of Civil and Biosystems

Engineering

Engineering 1, room 11-7

Pretoria, 0001

#### UNIVERSITY OF JOHANNESBURG

Certificate Road Transport Management

Certificate: Road Transport: Freight

Certificate Road Transport: Passenger

Diploma in Road Transport : Freight

Diploma Road Transport: Passenger

Diploma: Transportation Management

National Diploma in Transport Management

**BCOM Transport Economics** 

B Tech Transport Management

B Com Honours transport economics

Diploma in Logistics Management

B Tech Logistics, B COM (logistics

Management B COM Honours (Logistics

Management)

M Com / M Phil Transport Economics

MPhil: Transport Studies

Civil Engineering and Environmental

Engineering

PhD commerce: Transport Economics
PhD philosophy: Transport Economics

# For more information write to: the University of Johannesburg

Department of Transport and Supply Chain

Management

PO BOX 524, Auckland Park, 2006

#### UNIVERSITY OF THE NORTH WEST

**B** Com transport Economics

**B** Com Logistics Management

For more information write to: North-West University

Private Bag X2046, Mmabatho

2735

#### **UNIVERSITY OF SOUTH AFRICA**

Bachelor of commerce-BCom (with

specialisation in transport Economics)

Transport Economics As part of the BTech:

Engineering: Civil (transportation)

Transportation Technology As part of the

BTech: Engineering: Civil (transportation)

Transportation Planning As part of the

BTech: Engineering: Civil (transportation)

Transport approach to Logistics As part of the

BTech: Engineering: Civil (transportation)
Transportation Engineering As part of the

BTech: Engineering: Civil (transportation)

#### For more information contact:

The Department of Transport Economics,

Logistics and Tourism

AJH vd Walt Building, Room 2-03

UNISA, 0003

#### 11.3 SOUTHERN CENTRE

The Southern centre constitutes of the following institutions of higher learning: University of Stellenbosch, University of Cape Town, Nelson Mandela Metropolitan University, Peninsula Technikon

#### 11.3.1 INSTITUTIONS AND FIELD OF STUDY

#### UNIVERSITY OF STELLENBOSCH

**B** Logistics

**BCom in Logistics Analysis** 

BCom in Logistics Management

BCom in Transport Economics

BCom in Quantitative Management BSc in

**Operations Research** 

BPhil degree in Transport and Logistics Studies

MPhil degree in Transport and Logistics Studies

M Econ Transport logistics

M Comm. Transport logistics

M Comm. Hons transport logistics

BPhil degree in Maritime Studies

MPhil degree in Maritime Studies

For more information contact: The Department Of Logistics Private Bag X1, Matieland, 7602, South Africa, 021 808 2249

BEng (Civil)

**Bphil Maritime: transport logistics** 

PhD Civil engineering (Transport And Pavement

Engineering)

MEng civil engineering (Transport And Pavement

Engineering)

M Sc Eng (Transport And Pavement Engineering)

**NIVERSITY OF CAPE TOWN** 

Diploma in transport Studies,

Master of Philosophy in transport studies

Masters in Engineering in transport studies

Bachelor of science in Engineering

Masters in Law - Marine Law, Shipping law

For more information contact the

University of Cape Town, Private Bag,

Rondebosch 7701,

021 650 2699

**NELSON MANDELA METROPOLITAN** 

**UNIVERSITY** 

ND: Civil Engineering

B Technology: Civil Engineering

Masters in Technology: Engineering Civil

PhD Technology: Civil engineering

For more information contact

Nelson Mandela Metropolitan

University,

PO Box 77000, Port Elizabeth, 6031,

041-5042593

PENINSULA UNIVERSITY OF TECHNOLOGY

ND: Civil Engineering

B Technology: Civil Engineering

**Engineering: Civil** 

Nd: Engineering: Civil

B Tech: Engineering: Civil

M Tech: Engineering: Civil

D Tech: Engineering: Civil Engineering:

Mechanical

Nd: Engineering: Industrial

B Tech: Engineering: Industrial

Nd: Engineering: Mechanical

B Tech: Engineering: Mechanical

M Tech: Engineering: Mechanical

D Tech: Engineering: Mechanical

Nd: Engineering: Mechanical: Marine

For more info contact the Bellville

Campus:

Symphony Way, PO Box 1906, Bellville,

7535,

(021) 959 6911

Cape Town Campus: Keizersgracht and

Tennant Street,

Zonnebloem,

(021) 460 3911

Engineering	
Nd: Operations Management	
Nd: Maritime Studies	

# 12. OTHER INSTITUTIONS OFFERING TRANSPORT STUDIES

UNIVERSITY OF LIMPOPO	For more information contact the
B Admin Local Government and transport	University of Limpopo:
management	The School of Economics and
	Management
	University of Limpopo, Turfloop Campus,
	Private Bag X 1106, Sovenga, 0727
UNIVERSITY OF FORT HARE	Alice Campus: Tel: (040) 602-2241
Honours degree in Economics with a	
specialization in Transport Economics	
TSWANE UNIVERSITY OF TECHNOLOGYND	For more information contact:
Civil Engineering	Department of Civil Engineering. Building
BA Technology: Engineering Civil	3, Room 512, Pretoria
(Transportation Engineering)	
BA Technology: Engineering Civil (Urban	
Engineering)	
Mtech: Engineering Civil	
Doctorate Engineering Civil	

CENTRAL UNIVERSITY OF TECHNOLOGY	For more information contact: Central
N:Dip Civil Engineering	University of Technology, Free State,
Btech Engineering Civil	Private Bag X20539 BLOEMFONTEIN,
Btech construction management	9300, (051) 507-3911
Mtech Engineering Civil	
Dtech Engineering Civil	
Institution offering training in Air Traffic	For more information contact:
Control	Recruitment Office
	ATNS
ATNS Aviation Training Academy	Private Bag X15
Grade 12, with Mathematics and English (D	Kempton Park
symbol or higher on higher grade or C symbol or	1620
higher on standard grade)	Tel 011 961 0100
. Be aged between and 25	E-mail: recruitment@atns.co.za
. Medically fit	www.atns.com
. A South African Citizen	
. Be fluent in English with no speech	
impediment	

# 13. COLLEGES/ SCHOOLS FOR MARITIME STUDIES

**New Forest** 

P.O. Box 53194, Yellowwood Park, 4001

Tel: (031) 462 6206 Fax: (031) 469 1816

Maritime Studies A: Grades 10 to 12

Simon's Town School

P.O. Box 38, Simon's Town, 7995

Tel: (021) 786 1056 Fax: (021) 786 1065

Maritime Studies A and B: Grade 10 to 12, Boarding facilities available for learners

from beyond the Cape Town area

Sithengile High School

P.O. Box 419, Clernaville, 3602

Tel: (031) 711 3673 Fax: (031) 707 5166

Maritime Studies A: Grades 10 to 12

**Tisand Technical High School** 

Private Bag X8533, Esikhaweni, 3887

Tel: (035) 796 1040/70 Fax: (035) 796 4062

Maritime Studies A and B: Grade 10 to 12

14. WEBSITES, LINKS AND CONTACTS

**Department Of Transport and Transport** 

**Agencies** 

http://www.transport.gov.za

DOT (Department of Transport)

http://www.teta.org.za.

Transport Education and Training

Authority

http://www.nra.co.za

**National Road Agency** 

http://www.caa.co.za

South African Civil Aviation

Authority

http://www.airports.co.za

South African Airports Company

http://www.flysaa.com

South African Airways

content of this document please

contact:

The Department of Transport

**Directorate Capacity Development:** 

Tel: 012 309 3299/3981/36