

**LADOKE AKINTOLA UNIVERSITY OF TECHNOLOGY,
OGBOMOSO.**

FACULTY OF MANAGEMENT SCIENCES

DEPARTMENT OF TRANSPORT MANAGEMENT

CURRICULUM

FOR

**POSTGRADUATE PROGRAMES IN TRANSPORT
MANAGEMENT (M. Tech., M Phil and PhD)**

1.0 Introduction

1. The department of management sciences started as a service department and has grown into a full fledged department. The postgraduate programs has been designed to provide advanced training (course work and research) in those areas of transport Management which are relevant to the industrial development of our state and the nation in general. Transport is crucial in all aspects of the economic and political studies. Graduates in transport management are in high demand by a wide variety of industries, Non – governmental organization, state and federal Government. The programs is designed to solve the myriad of the seemingly intractable problems currently plaguing our nation transport sector. Also, career opportunities in the academia are excellent for PhD. Graduate and qualified high level personnel in Transport Management in our newly established private and public tertiary institutions across the country.

2.0 OBJECTIVE

The objective of the postgraduate programmes are as follow:

1. To provide an education through research and examinations leading to a post-gradual degree in Transport Management

2. To foster investigation and research in the development and improvement of the transport sector of Nigeria development in particular, and the developing countries in general.
3. To provide students with sufficient knowledge and skill to work competently in varied planning/management position in the public and private sectors, and solid intellectual and methodological foundation for the graduate as they move on their professional careers and assume increasing challenging positions in transport management.
4. To expose student to both theoretical and practical aspects of transport and logistic management which exchange effective participations in national and regional development programmes
5. To produce seasoned lectures that will teach transport in Nigeria tertiary institutions and provide the student with ample opportunities to show case his/her research capability by going into indepth research in carefully selected areas of specialization.

2.0 AREAS OF SPECIALIZATION

The postgraduate programmes will lead to the award of Master of Technology (M.Tech.), Master of philosophy (M.Phi.) and Doctor of philosophy (phD) degree in any of the following four areas of specialization.

1. Logistics Management

2. Air and Aviation Management
3. Maritime/Shipping Management
4. Overland Transport Management

4.0 FACILITIES AVAILABLE FOR RESEARCH

The department is one of the departments within the faculty of Engineering and Technology of the University. It however has facilities for its independent usage in form of:

- i) Well Equipped Library.
- ii) Well Equipped Laboratory
- iii) Computer Facility
- iv) Qualified Resources Personnel

Furthermore generalized University facilities in form of the central Library an inter-collegiate/faculties use of academic personnel are at the disposal of the department.

5.0 DEGREES OFFERED

1. Master of Technology (M.,Tech.) in Transport Management
2. Master of philosophy (M. Phill.) in Transport Management
3. Doctor of Philosophy (phD) in Transport Management

5.1 M. TECH. (Transport Management)

(a) Admission requirements

The programme leading to the award of M. Tech degree is open to the following applicants:

- i) Every candidate must have five credit passes including English and Mathematics at O' level as basic requirement
- ii) Holder of bachelor's degree of Ladoke Akintola University of Technology or any other recognized University who have obtained at least a second class lower degree in either Transport Management or studies, Social and Management Science, Engineering or Environmental Studies.
- iii) Holders of Professional Master in Transport Management (MTM) of Ladoke Akintola University of Technology with not less than 60% weighted average.
- iv) Candidates may be require to satisfy the department in a selection process.

(b) Programme Duration

The minimum period for the M.Tech. Programme shall be 3 semester (2 semesters for course work and the remaining one semester for project) and maximum of six (6) semester for full time student.

(c) Degree Requirements

To obtain an M.Tech in Transport Management, a candidate must:

1) Satisfy a minimum of 50 units, made up as follows:

- 36 units of compulsory courses
- 8 units of elective courses
- 6 units of research project

Satisfy all other requirements as stipulated in the regulation of the school of postgraduate studies.

(d) Examination and Assessment

Examination of all prescribed subjects will consist of 3 hours papers. The candidates will sit for the end of the semester during which the subject are offered. A continuous assessment of up to 30% is expected to constitute part of the final grade in all the courses. A thesis based on the original research work on the approved project shall be submitted by each candidate who will also be required to pass an oral examination in line with the regulations of the school of postgraduate studies.

The level of performance in any examination will be assessed to the following grading system.

SCORE	GRADE
70 and above	A
70-69	B

50-59	C
45-49	D
0-44	E

Weighted Point Average (W.P.A)

60 and above	Ph. D Grade
55-59.9	M.Phil/phD Grade
50-54.9	M.Phil Grade
45-49.9	Terminal Grade
0-44.9	Fail

5.2 M.Phil. (Transport Management)

The programme leading to the award of M.Phil. degree is open to candidates who scored below 54.9% but not less than 50% weighted average in their M.Tech programme or equivalent. Such is therefore require to fulfill the following requirement to be awarded the degree:

- Satisfy the course work requirement prescribed by the department depending on such deficiency
- Satisfy all other exiting requirements as stipulated in the regulations of the postgraduate school.

5.2 ph. D (Transport Management)

(a) M. phil/phD Requirement

A candidate with an M.Tech degree in Transport Management or its equivalent with a minimum weighted of 55% and maximum of 59.9% can be admitted to this programme . Such is therefore required to fulfill the following requirements to proceed to PhD programme:

- * satisfy the course work requirements prescribed by the department depending on such deficiency.

- * satisfy all another existing requirement as stipulated in the regulations of the postgraduate school.

(b) PhD requirement

The programme leading to the Award of Doctor of Philosophy degree is open to candidates holding the Master's degree from either the Ladoke University of Technology or any other recognized universities with a weighted average score of not less than 60%. To obtain a PhD in Transport Management, a candidate must:

- Satisfy the course work and seminar requirements prescribed by the department.

- Submit a thesis on approved project. He/She shall be required to pass oral examination. The board of examination shall be constituted according to the regulation of the postgraduate school.
- Satisfy all other existing requirement as stipulated in the regulations of the postgraduate school.

Duration

The PhD programme shall be full-time studies and last not less than four semesters, or two academic sessions and a maximum of 8 semesters.

On the expiration of the maximum duration, a candidate may apply in writing for an extension of not less than two semesters, after which his/her studentship will lapse.

List of Teaching Staff

S/N	NAME ACADEMIC STAFF	QUALIFICATION	RESEARCH INTEREST	PRESENT STATUS
1.	Dr. J.O Adewoye	B.Sc., PGD, MBA, MCPN, PhD	Economics, E-commerce Operation Management, Public Finance.	Snr. Lecture/Ag Head of Dept.

2.	Prof. B.A Oyelere	B.Sc., M.Sc, Ph.D.	Operation Research, Quantitative in Management, Mathematics and Statistics Mgt.	Professor
3.	Prof. A.S Ogunsiji	B. Sc., MBA, Phd	Marketing/Physical Distribution Mgt, Strategic Mgt.	Professor
4.	Prof. B.A Badejo	B.Sc; MUCP, Ph.D; MCILT, RTP, MNITP	Transport Planning and Logistic Management	Associate Professor
5.	Dr. J.A Ojekunle	B.Sc., M.Sc., PhD, MCILT, MNITP	Transport Planning	Lecturer I
6.	Prof. A.A Ogunsanya	B.Sc., M.Sc., M.Phil/Ph.D, FCILT, MWCTRS.	Transport Planning Maritime & Transport Management	Associate Professor
7.	Professor S.O. Fadare	B.Sc, MURP, PhD, MNITP, RTP	Transport Planning	Associate Professor
8.	Dr. G.T. Arosanyin	B.Sc., M.Sc., Ph.D, MCILT, AMINM	Transport Economics and Safety	Associate Senior Lecturer
9.	Prof. M.O. Ilori	B.Sc., M.sc., Ph.D	Technology Management	Associate Professor
10.	Dr. N.B.Tanimowo	B.Sc., MURP. Ph.D	Transport Planning	Associate Professor
11.	Dr. K.T. Gbadamosi	B.Sc., M.Sc., PhD	Transport Planning	

LIST OF COURSES

First Semester

All M. Tech students in Transport Management shall offer the following core courses in the first semester plus minimum of two other electives from the following courses:

Compulsory Courses

COURSE CODE	TITLE	CREDIT UNIT
MTM 801	QUANTITATIVE METHODS IN TRANSPORTATION STUDIES	3
MTM 803	HISTORY OF TRANSPORT	3
MTM 805	TRAFFIC EDUCATION AND SAFETY	3
MTM 803	MARIME TRANSPORT	3
MTM 809	LAW OF BUSINESS AND CARRIAGE	3
MTM 811	AIR TRANSPORT	3
	TOTAL	18

ELECTIVE COURSES FIRST SEMESTER

COURSE CODE	TITLE	CREDIT UNIT
MTM 813	RURAL TRANSPORT	2
MTM 815	TRAFFIC MANGEMENT AND CONTROL	2
MTM 817	TRANSPORT AND ENVIRONMENTAL	2
MTM 819	LAND FREIGHT PLANNING AND MANAGEMENT	2

MTM 821	TRANSPORT AND THEORISM	2
	TOTAL	10

Second Semester

All M. Tech students in Transport Management shall offer the following core courses in the Second semester plus minimum of two other electives from the following courses:

Compulsory courses

COURSE CODE	TITLE	CREDIT UNIT
MTM 802	TRANSPORT ECONOMICS	3
MTM 804	TRANSPORT AND TRAFFIC SURVEY METHOD	3
MTM 806	TRANSPORT POLICY ANALYSIS	3
MTM 808	LOGISTICS AND PHYSICAL DISTRIBUTION MANAGEMENT	3
MTM 810	RAIL TRANSPORT	3
MTM 812	MANGEMENT ACCOUNTING AND FINANCE INTRANSPORT SECTOR	3
MTM	RESAERCH MEHTODOLOGY	3
	TOTAL	18

ELECTIVE COURSES SECOND SEMESTER

Course code	Title	Credit unit
MTM 814	INDUSTRIAL RELATIONS IN THE TRANSPORT SECTOR	2
MTM 816	PUBLIC TRANSPORT OPERATION AND MANAGEMENT	2
MTM 818	TRANSPORT FOR SPECIALIZED NEED	2
MTM 820	TRANSPORT AND SOCIETY	2
MTM 822	TRANSPORT AND DEVELOPMENT	2
	TOTAL	10

THIRD AND FOURTH SEMESTER

Course Code	Title	Credit unit
MTM 830	PROJECT	6

DESCRIPTION OF COURSES

MTM 801: QUANTITATIVE METHODS IN TRANSPORTATION

STUDIES

Introduction to advanced research methods, application of statistical/mathematical concept in transport planning, analysis of point, patterns, covariance and multi-variance methods, mathematical modeling techniques, viz stochastic, optimizing and entropy model. Introduction to multi-variance statistical analysis, factor and principal component

analysis, linear surface mapping, time series analysis, linear programming, introduction to computer application in transport studies.

MTM 803 HISTORY OF TRANSPORT

Transport and pre-industrial era, transport and the industrial revolution, the emergence of the railway system, the development of motor transport, rail/road competition, the development of maritime transport, history of Nigerian transport, history of air transport.

MTM 802: TRANSPORT ECONOMICS

Definition of economic, micro vs macro economic concepts, transport economics, transport demand, transport supply, transport pricing, taxes and subsidies or transport consumer satisfaction. Illustration examples from all modes of transport.

MTM 804: TRANSPORT AND TRAFFIC SURVEY METHODS:

Theory and practice of survey research, planning, sampling questionnaire construction, interviewing consent analysis, machine tabular analysis of data, field work, data collection and organization, types of traffic surveys, step in conducting surveys traffic volume counts, parking counts, estimation of traffic Delays and spends by moving car observer and methods. Pedestrian traffic counts and crossing delays, origin – destination surveys, (including journey purpose)., accident survey, some interview surveys, screen ling and cordon surveys.

MTM 813: RURAL TRANSPORT

Rural transport needs/ rural transport freight characteristics. Characteristic of rural transportation schemes, the principle of market centers, complementarily between rural an urban transport network. Transport and rural development, Rural settlement Planning in development and developed countries. \

MTM 805: TRAFFIC EDUCATION AND SAFETY

Historical development of transportation planning. Data inputs (from surveys) matrix-building origin-destination matrices and data analysis. Trip generation, trip distribution modal split, traffic assignment, traffic growth and forecasting. Patterns of travel, frequency, and relationship with socio-economic characteristic. Modeling techniques of travel pattern. Illustrative examples from all modes, Landuse transportation planning.

MTM 814: INDUSTRIAL RELATIONS IN THE TRANSPORT SECTOR

Environment framework of industrial relation in Nigeria and its practices in Transport Industry. The development, growth and problems of Trade Unions. The structure of Nigeria Labour movement in Transport sector, management and labour Relation policy. General principle of voluntary collective bargaining. Employer's Association – organization and role, relationship with government and other bodies. Case studies from the different modes of transport.

MTM 807: MARITIME TRANSPORT

Maritime transport the economic and analytical standpoints, major shipping markets. Institutional legal and other and issues in maritime transport. Optimum ship design. Finance and taxation balance of payment effects on maritime. Maritime freight planning and management. Role of shipping in both developed and development countries.

MTM 815: TRAFFIC MANAGEMENT AND CONTROL

Road traffic law and regulations, measure to improve traffic for public transport, channelization and storage lanes, traffic signals one way street banning right turns or left turns, bus lanes pedestrianization, altering travel pattern e.g. use of bye-pass for through traffic. Road signs, signs of letters designs and legibility distance comprehensibility of signal pavement signs. Location and operation of parking lots. Traffic volume and parking lots designs safety at parks, toll collection and parking, traffic and park management.

MTM 811: AIR TRANSPORT

Economics and commercial aspects of Air Transport, Airlines and Air and Air transport. Airline and operations and their economics regulation. Air freight operations and management. Air Transport infrastructural requirement environment issue in Air transport operation. Role of Air transport both the developed and developing countries.

MTM 817: TRANSPORT AND ENVIRONMENT

Theoretical background land water and air pollutions in relation to transport development. Transport and global warming. Transport and environmental degradation road wear and tear, vibrations, delays and visual instructions. Problems of traffic centers.

MTM 816: PUBLIC TRANSPORT OPERATION AND MANAGEMENT

Public transport in the global context, Role of private enterprise in public transportation. Operation and administration of public transport in developed and developing countries. Operation and administration of public transport in different modes of transport, road rail and inland waterways problem of public transport in development of mass transit programme in Nigeria. Operation and Management of mass transit, problem of mass transit programme in Nigeria.

MTM 819 LAND FREIGHT PLANNING AND MANAGEMENT

Characteristics of private transport systems, vehicle ownership structure, vehicle owners and drives. Private transport interest, vehicle, maintenance and refurbishing. Freight planning, Freight management. Historical, political, operational and financial aspects of railway management, example drawn from developed and developing countries. Development of road transport programme road rail haulage and management vehicle customs standardization.

MTM 818: PRINCIPLES OF TRAFFIC ENGINEERING

Fundamentals of traffic engineering in transport. Transport network analysis, and road design. Road standards and carrying capacity (weight). Bridge construction, traffic control and automation, roundabouts and curves, T-junctions, car parks designs and terminals. Traffic engineering in shipping operations, air traffic control and operations. Rail traffic signals.

MTM 806: TRANSPORT POLICY ANALYSIS

Government transport policy. Rationale of government intervention in the transport sector. Transport port policy strategies, evaluation and impact of transport policy on economic sector of the nation. Formulation and implementation of transport policy. National planning policies and role of transport.

MTM 820: TRANSPORT AND SOCIETY

The needs of society for transport, and the impact of transport modes with regard to ownership (public and private) transport control (regulation). Relationship of transport to landuse and the environment, energy needs of transport. Cultural influence on modal patronage of transport in developed countries.

MTM 822: TRANSPORT AND DEVELOPMENT

Theoretical background of transport and development, active, and permissive roles. Transport and generation of employment, transport and economic productions, transport and trade, transport and tourism.

Transport and political and economic integration. Role of Telecommunication in spatial interaction, telecommunication, travel behavior and regional development.

MTM 810: RAIL TRANSPORT

Evolution of rail Transport. Rail Transport and National Economy. Rail Operation within the context of through Transport. Rail Infrastructure, Terminals/Tracks. Rail Traffic Management Control Railway and Freight movement Railway and Passenger Movement. Nigeria Railway Corporation, Rail Transport Management. Socio-Economic and Environmental Issues in Rail Transport Technology and Rail Operation and Society.

MTM 809: LAW OF BUSINESS AND CARRIAGE

Law of contract in transport partnership; insurance by types and for transport mode; Government and business, Statutory Responsibilities/Duties of Transport Undertakings; Principle of indemnity.

Law of carriage in different mode of transport:

(i) **Sea Transport and Marine Insurance:**

Good- charter parties and Bills of Lading. The Preliminary voyage, Loading Discharge and delivery, limitation of liability; Marine Policy warranties; cause proxima; General Average loss.

(ii) **Land Transport**

Good- Parties to contract; Bailment, common and private carries, liability at common law and under standard condition of carriage; Privities of contract, consigner's warranty of fitness, Terms and condition of Carriage; The carriage of Luggage; CPOTIF and CMR conventions. Motor Insurance; Type, certificate; foreign etc.

(iii) **Aviation Transport**

ICAO, IATA, Aviation Insurance.

MTM 812 MANAGEMENT ACCOUNTING AND FINANCE IN TRANSPORT SECTOR

Control theory in Accounting: standard costing, marketing strategy, performance evaluation techniques. Profitability criteria and ratios. Nature of and return on capital. Transfer pricing. Management of working capital in Transport valuation of transport business. Effects of taxation and other governmental policies on investment and financial decision. In transport Sector. Cost-benefit analysis of transport projects. Intra-company performance evaluation. Financial imports and exports of transport related goods.

MTM 828: TRANSPORT TECHNOLOGY

(A) Infrastructural base for transport;

(i) Way and Routes, special characteristics of the various ways and Routes in different modes of transport. Factors limiting traffic capacity, traffic control systems and means of communicating with or controlling the vehicle on route. Special maintenance problems associated with track, highways, runways, etc.

(ii) Terminals and Interfaces: Planning Design and operation of terminals one or modes of transport simultaneous.

(B) Motive Power; Vehicle Design and Operation;

(i) Motive Power; Basic power cycles and efficiencies of Otto Diesel and Gas Turbine Engines. Fuel consumption and specific weight of typical engines. Complete power unit (including transmission) efficiencies.

(ii) Vehicles Design: Vehicles designs for safety, weight control of vehicles, special control problems of vehicle (e.g. maneuvering in confined areas). Specialized vehicle design e.g. for containers. Effect of environmental controls on vehicle design.

(iii) Operation of Vehicle: Breakdown of operating costs of vehicle.

Methods of operation which minimize operation Maintenance of vehicle, Three stages programmed or planned maintenance, overhaul or refit. Fault diagnosis and rectification of defect in service. Replacement

and defect analysis. Statutory requirement concerning maintenance.
Duties and responsibilities of regulatory bodies and operators.

MTM 821: TRANSPORT AND TOURISM

Definition of tourism and common terms in the context, e.g. inclusive tourism package holiday etc. The main tourist markets; and the Principle areas and destinations which cater for them. Historical growth of tourism; Recent trends and development in holiday and leisure travel; Demand and supply factors of tourism; Patterns and major Implication of tourism. Transport for Tourism, National Regional and Local Policy on Tourism Financial Operational and Commercial Aspects of Tourism. Tourism and the Public interest.

MTM 808: LOGISTIC/ PHYSICAL DISTRIBUTION MANAGEMENT

The organization and principal characteristics of distribution management. The interaction between material handling, freight transport, packaging ware-house location and management; inventory control, communication and data processing; the importance of distribution channels; the total distribution concept in theory and practice and application to the commercial policy of the business. The significant of logistics and distribution, managing logistics and distribution system; Network planning techniques to obtain optimum movement capacity and

required level of customer service; the implication of electronic of electronic data processing and the need for data banks; analysis of traffic demands, forecasts and performance.

MTM 830: PROJECT (6C)

Independent works in a chosen area of transport under the supervision of lecturer in the Department and should not exceed 15,000 words, (Maximum 150 pages A4, double line spacing).

MTM 832: INTERNSHIP/ SEMINAR (3C)

Student to undergo a 6 week in recognized transport establishment, and will be expected to present at Departmental seminar, paper on approved transport related topics emanating from the internship programme. (At the beginning of third semester)