

NATIONAL BOARD FOR TECHNICAL EDUCATION



HIGHER NATIONAL DIPLOMA (HND)

IN

TRANSPORT PLANNING MANAGEMENT

CURRICULUM AND COURSE SPECIFICATIONS

MARCH, 2022

HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT
GENERAL INFORMATION HND IN TRANSPORT PLANNING AND MANAGEMENT
PROGRAMME

1.0 TITLE OF THE PROGRAMME: The title of the programme is **Higher National Diploma Transport Planning Management**

2.0 Goal and Objectives of the Programme

Goal: The programme is designed to produce professionals with required knowledge and skills in transport planning and management.

Objectives:

On completion of the Programme, the grandaunts should be able to:

- i. Recognize contributions of transport planning and management in nation building
- ii. Analyze the various level of transport planning, operations and management
- iii. Analyze various transport challenges and their solutions
- iv. Conduct transport survey and write a technical report
- v. Partake in the planning and construction of transport facilities
- vi. Establish investment opportunities and manage small and medium transport enterprise
- vii. Apply theories and models in transport planning and management
- viii. Apply laws and regulations guiding the operations and management in the transport systems.
- ix. Carry out management and administrative duties in Transport Planning and Management with minimum supervision
- x. Apply the computer and transport information and communication systems appropriately in transport operations

3.0 ENTRY REQUIREMENTS

The general entry requirements for the HND in Transport Planning Management programme include:

- a. All the requirement for the National Diploma (ND) in Transport Planning Management with a minimum of lower credit pass (CGPA) of 2.50 and above obtained from an NBTE accredited programme plus a minimum of one year Post-ND cognate work experience in Public Administration
- b. In exceptional cases, the ND diplomates with a pass grade (CGPA) 2.0 - 2.49) in the ND examination that had two or more years of cognate work experience may be considered for admission into the programme. However, the number of candidates should not be more than 10% of the total student intake in each class.

4.0 STAFFING REQUIREMENT

4.1 Headship of the Department

The HOD should be at least a Senior Lecturer who has a minimum of second Degree in Transport Planning Management. He should have at least 5 years cognate experience and must be registered with relevant professional body.

4.2 Core Teaching Staff

At the point of mounting the programme, there should be a minimum of four Lecturers who should spread from Lecturer II and above with first/second degrees (BSc/MSc,) in Transport Planning Management.

4.3 Technical Staff

These are technically qualified staff not involved in direct lecturing/instructing, but who provide vital and indispensable services in all facilities used in the implementation of the programme.

5.0 CAREER/ ACADEMIC PROSPECTS

On successful completion of the programme, the graduate of Transport Planning Management can work in both Public and Private sector organization as listed:

1. Transport Divisions of Ministries, Departments, and Agencies
2. Military and Para-Military Agencies
3. Government/Private companies
4. Academics and Research Institutes

He or she can go further in he or she academic pursuit for PGDPA, Masters degree in Transport Planning Management and the following programmes:

1. PGD, MSc, PhD in Transport Planning and Management
2. PGD, MSc, PhD in Transport and Logistics Management
3. PGD, MSc, PhD in Transport Safety Technology
4. PGD, MSc, PhD in Project Management
5. PGD, MSc, PhD in Aviation Management
6. PGD, MSc, PhD Maritime Management
7. PGD, MSc, PhD Transport Management

6.0 DURATION

The duration of the programme is two academic sessions consisting of four semesters of 17 weeks each.

7.0 CURRICULUM

7.1 The curriculum of the programme consists of four main components. These are:

General Studies;
Foundation Courses;
Professional Courses;
Project.

7.2 The General Education component shall include courses in:

English Language, Entrepreneurship and Citizenship Education. The General Studies component shall account for not more than 10-15% of the total contact hours for the programme.

Foundation courses include courses in Economics and Computer Science. The number of hours for the courses may account for about 10-15% of the total contact hours.

Professional courses are core courses of the programme that give the student the theory and professional skills he/she needs to practice his/her field of calling at the Technologist level. These may account for between 70-80% of the contact hours.

8.0 CURRICULUM STRUCTURE

The structure of the programme consists of four semesters of classroom, and workshop activities in the institution. Each semester shall be of 17 weeks duration made up as follows:

- a. 15 weeks of teaching, i.e. instruction, practical exercise, quizzes, test, etc; and
- b. 2 weeks for examinations and registration.

9.0 ACCREDITATION

The National Board for Technical Education shall accredit the programme before the diplomates can be awarded the Higher National Diploma certificates. Details about the process of accrediting a programme for the award of the Higher National Diploma are available from the office of the Executive Secretary, National Board for Technical Education, Plot “B”, Bida Road, P.M.B. 2239, Kaduna, Nigeria.

10.0 AWARD OF HIGHER NATIONAL DIPLOMA

10.1 Conditions for the award of Higher National Diploma include the following:

- a. satisfactory performance in all prescribed course work, which may include class work, tests, quizzes.
- b. Workshop practice, laboratory work and fieldwork.
- c. Satisfactory performance at all semester examinations.
- d. Satisfactory completion of final year project work.

Normally, for all courses including final year project work, continuous assessment contributes 40%, while semester examinations and project reports are weighted 60% to make a total of 100%. For Seminar presentation, Continuous assessment contributes 30%, while Seminar reports are weighted 70% to make a total of 100%.

10.2 Higher National Diploma should be awarded in four classes:

- a. Distinction - CGPA of 3.50 and above
- b. Upper Credit - CGPA of 3.0 - 3.49
- c. Lower Credit - CGPA of 2.50 - 2.99
- d. Pass - CGPA of 2.00 - 2.49.

10.3 Grading of Courses: Courses shall be graded as follows:

MARKED RANGE	LETTER GRADE	WEIGHTING
75% and above	A	4.00
70% – 74%	AB	3.50

65% – 69%	B	3.25
60% – 64%	BC	3.00
55% – 59%	C	2.75
50% – 54%	CD	2.50
45% – 49%	D	2.25
40% – 44%	E	2.00
Below 40%	F	0.0

11.0 GUIDANCE NOTES FOR TEACHERS

- 11.1** The new curriculum is drawn in unit courses. This is in keeping with the provisions of the National Policy on Education which stress the need to introduce the semester credit units which will enable a student who so wishes to transfer the units already completed in an institution of similar standard from which he/she is transferring.
- 11.2** In designing the units, the principle of the modular system by product has been adopted, and each of the professional modules, when completed provides the student with technologist operative skills, which can be used for employment purposes or self-reliance.
- 11.3** As the success of the credit unit system depends on the articulation of programmes between the institutions and industry, the curriculum content has been written in behavioral objectives, so that it is clear to all the expected performance of the student who successfully completed some of the courses or the diplomates of the programme. This is slight departure in the presentation of the performance based curriculum which requires the conditions under which the performance is expected to be carried out and the criteria for the acceptable levels of performance. It is a deliberate attempt to further involve the staff of the department teaching the programme to write their own curriculum stating the conditions existing in their institution under which performance can take place and to follow that with the criteria for determining an acceptance level of performance.

The Academic Board of the institution may vet departmental submission on the final curriculum. Our aim is to continue to see to it that a solid internal evaluation system exists in each institution for ensuring minimum standard and quality of education in the programmes offered throughout the Polytechnic system.

- 11.4** The teaching of the theory and practical work should, as much as possible, be integrated. Practical exercises, especially those in professional courses and laboratory work should not be taught in isolation from the theory. For each course, there should be a balance of theory to practical in the ratio of 50:50 or 60:40 or the reverse.

12.0 PRACTICAL LOGBOOK

A personal Logbook to be kept by each student shall contain all the day-to-day, weekly summary, and semester summary of all the practical activities from day one to the end of the programme. This is to be checked, marked, endorsed and recorded by the lecturers/technologists concerned at the end of every week.

13.0 FINAL YEAR PROJECT

Final year students in this programme are expected to carry out a project work. This could be on individual basis or group work of not more than two students per group, but reporting must be undertaken individually. The project should, as much as possible incorporate basic elements of design, drawing and complete fabrication of a marketable item or something that can be put to use. Project reports should be well presented and should be properly supervised.

The departments should make their own arrangement of schedules for project work.

**HND PROGRAMME IN TRANSPORT PLANNING AND MANAGEMENT
YEAR 1 SEMESTER 1**

CODE	COURSE TITLE	L	P	CH	CU
GNS 311	International Relations	2	0	2	2
MKT 424	Marketing Analysis and Decision making	2	0	2	2
EED 312	Entrepreneurial Development I	1	2	3	1
TPM 311	Management Accounting in Transport	1	0	3	2
TPM 312	Transport Finance and Investments	2	0	2	2
TPM 313	Management and Transport Organizational Behavior	2	0	2	2
TPM 314	Quantitative Techniques in Transport	1	0	3	2
TPM 315	Integrated Public Transport Planning and Operations	1	0	3	2
TPM 316	Transport Planning	1	2	3	2
TPM 317	Transport and Environment	2	0	2	2
TPM 318	Rail Operations and Management	1	0	3	2
TPM 319	Change to Transport Planning Design V	1	4	5	3
	Total	17	8	33	24

YEAR 1 SEMESTER 2

CODE	COURSE TITLE	L	P	CH	CU
GNS 321	Communication in English	2	0	2	2
TPM 321	Change to Traffic Engineering	2	1	3	2
TPM 322	Change to Transport Insurance	2	0	2	2
TPM 323	Law of Business and Carriage	2	0	2	2
TPM 324	Freight Transport Planning and Management	2	0	2	2
TPM 325	Fleet Operations and Management	2	0	2	2
TPM 326	Transport for Specialized Need	2	0	2	2
TPM 327	Research Methods in Transport Planning and Management	2	0	2	2
TPM 328	Transport Policy and Administration	2	0	2	2
TPM 329	Aviation Operations and Management	1	0	3	2
TPM 330	Change to Transport Planning Design VI	1	3	5	3
	Total	20	4	27	23

YEAR 2 SEMESTER 1

CODE	Course Title	L	P	CH	CU
GNS 412	Psychology	2	0	2	2
EED 416	Entrepreneurship Development	1	1	2	1
TPM 411	Project Planning and Evaluation	2	0	2	2
TPM 412	Transport and Tourism	2	0	2	2
TPM 413	Change to Land Use planning and Analysis	1	0	2	2
TPM 414	Transport Seminar	2	0	2	2
TPM 415	Change to transport management information systems	2	0	2	2
TPM 416	Traffic Management and Safety	1	0	3	2
TPM 417	Fundamentals of Operations Research	1		3	2
TPM 418	Change to pipeline transport operations and management	21	0	23	2
TPM 419	Change to Transport Planning Design VII	1	3	5	3
	Total	16	4	28	22

YEAR 2 SEMESTER 2

CODE	Course Title	L	P	CH	CU
GNS 421	Communication in English	2	0	2	2
TPM 421	Change to freight clearing and forwarding	2	0	2	2
TPM 422	Transport Technology	1	2	3	2
TPM 423	Transport Economics	2	0	2	2
TPM 424	Rural Transport Operations and Management	2	0	2	2
TPM 425	Logistics and Supply Chain Management	2	0	2	2
TPM 426	Maritime Transport Operations Management	2	0	2	2
TPM 427	Change to professional Ethics and Practice in Transport	1	0	3	2
TPM 428	Project	1	0	2	3
TPM 429	Change to transport planning design VIII)	1	3	5	3
	Total	17	3	24	22

YEAR 1 SEMESTER 1

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: MANAGEMENT ACCOUNTING IN TRANSPORT	Code: TPM 311	Credit Hour:2 Credit Unit:2
	Pre-requisite:	Theoretical: 2 hours/week
Year:1 Semester: 1		Practical 0 : hours/week
Goal: The course is intended to equip the students with knowledge of management of accounting techniques to support management in planning, controlling and monitoring performance in transport organization		
General Objectives:		
On completion of this course, the student should be able to:		
1.0 Comprehend the nature, source and purpose of management accounting		
2.0 Comprehend the fundamentals of accounting concepts		
3.0 Apply cost accounting techniques		
4.0 Prepare budgets for planning and control in transport organization		
5.0 Compare actual costs with standard costs and analyze any variances		
6.0 Recognize the performance measurements and monitor transport business		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT						
COURSE TITLE: MANAGEMENT ACCOUNTING IN TRANSPORT			COURSE CODE: TPM 311	CONTACT HOURS: 2		
GOAL: The course is intended to equip the students with knowledge of management accounting techniques to support management in planning, controlling and monitoring performance in transport organization						
COURSE SPECIFICATION:		THEORETICAL CONTENTS		PRACTICAL CONTENTS		
General objective 1.0: Comprehend the nature, source and purpose of management accounting						
WK	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
1-3	1.1 Explain the nature, source and purpose of management accounting 1.2 Outline roles and principles of accounting 1.3 Explain Double Entry Book Keeping 1.4 Explain capital and revenue expenditure in business	i. Explain the nature, source and purpose of management accounting ii. Discuss the roles and principles of accounting iii. Prepare double Entry Book Keeping iv. Discuss capital and revenue expenditure in business v. Prepare of Trial Balance	Textbooks, Financial Reports, Annual Reports			State the principles of accounting Prepare Trial Balance for transport activities
General Objective 2.0: Comprehend the fundamentals of accounting concepts						

4-5	<p>2.1 State the fundamentals of accounting concepts</p> <p>2.2 Explain the Techniques for cash Flow Statements</p> <p>2.3 Explain accounting for Depreciation</p> <p>2.4 Discuss accounting ratios and Interpretation</p> <p>2.5 Describe final accounts for transport business</p>	<p>2.1 Explain fundamentals of accounting concepts</p> <p>2.2 Explain techniques for cash flow statements</p> <p>2.3 Prepare accounting for depreciation, bad debts and provisions for bad debts</p> <p>2.4 Discuss accounting ratios and interpretation, financial reporting and users of account</p> <p>2.5 Prepare Final Accounts for transport business</p>	Textbooks, Financial Reports, Annual Reports			Appraise the fundamentals of accounting concepts
General Objective 3.0: Apply cost accounting techniques						
6-7	<p>3.1 Define accounting for material, labour and overheads</p> <p>3.2 Differentiate between absorption and marginal costing</p> <p>3.3 Explain cost accounting methods</p> <p>3.4 Describe alternative cost accounting</p>	<p>i. Explain accounting for material, labour and overheads</p> <p>ii. Explain absorption and marginal costing</p> <p>iii. Discuss cost accounting methods</p> <p>iv. Discuss alternative cost accounting principles</p>	Relevant Multimedia presentation, Textbooks Journals, Publications on transportation and project planning			<p>With relevant example, differentiate between absorption and marginal costing</p> <p>Appraise cost accounting methods</p>

	principles					
General Objective 4.0: Prepare budgets for planning and control in transport organization						
8-9	4.1 Define budget 4.2 Outline techniques for budget preparation 4.3 Explain capital budgeting and discounted cash flow 4.4 Explain budgetary control and reporting 4.5 Prepare budget for mini organization	i. Explain the nature, components and purpose of budgeting ii. Discuss techniques for budget preparation iii. Explain capital budgeting and discounted cash flow iv. Explain budgetary control and reporting v. Give assignment on budget preparation	Textbooks, Financial Reports, Annual Reports			Differentiate between capital budgetary and discounted cash flow Prepare budget for a transport organisation
General Objective 5.0: Compare actual costs with standard costs and analyze any variances						
10-12	5.1 Explain Costing Concepts 5.2 Explain accounting for Overheads 5.3 Explain Standard costing and Standard costing system 5.4 Explain variance calculations and analysis 5.5 Discuss reconciliation of budgeted and actual	i. Explain Costing Concepts; Costs Classification and Behavior. ii. Discuss accounting for Overheads iii. Differentiate between Standard costing and Standard costing system iv. Explain variance calculations and analysis	Textbooks, Financial Reports, Annual Reports			Explain Costing Concepts Differentiate between Standard costing and Standard costing system

	profit	v. Explain reconciliation of budgeted and actual profit				
General objective 6.0: Recognize the performance measurements and monitor transport business						
13-14	6.1 Define performance measurement 6.2 Explain the application of performance measurement 6.3 Differentiate between cost reductions and value enhancement 6.4 Explain the methods for monitoring performance and reporting	i. Explain performance measurement ii. Explain the application of performance measurement iii. Discuss cost reductions and value enhancement iv. Describe the methods for monitoring performance and reporting	Textbooks, Financial Reports, Annual Reports Journals			Differentiate between cost reductions and value enhancement

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: TRANSPORT FINANCE AND INVESTMENTS	Code: TPM 312	Credit Hour: 2 Credit Unit:2
	Pre-requisite:	Theoretical: 2 hours/week
Year:1 Semester: 1		Practical 0 : hours/week
Goal: The course is intended to acquaint students with knowledge of financial investment in transport system		
General Objectives:		
On completion of this course, the student should be able to:		
1.0 Comprehend the nature of transport finance and investment.		
2.0 Appreciate market structure and marketing strategies in relation to transport industry		
3.0 Comprehend investment appraisal for decision making in transport enterprise		
4.0 Appreciate Public-Private Partnerships for the provision of transport infrastructure		
5.0 Analyze the risks and uncertainty in transportation finance and investments		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORTATION PLANNING AND MANAGEMENT						
COURSE TITLE: TRANSPORT FINANCE AND INVESTMENTS			COURSE CODE: TPM 312	CONTACT HOURS: 2-0-0		
GOAL: The course is intended to equip the students with knowledge of financial investment in transport system						
COURSE SPECIFICATION:		THEORETICAL CONTENTS		PRACTICAL CONTENTS		
General objective 1.0: Comprehend the nature of transport finance and investment						
WK	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
1-2	1.1 Define transport finance and investment 1.2 Examine the nature of transport finance and investments 1.3 Explain the sources of finance and investment potentials in transport	Explain transport finance and investments Examine the nature of transport finance and investments Explain the sources of finance and investment potentials in transport	Textbooks, Financial Reports, Annual Reports			Differentiate between finance and investments Present a case study of transport finance and investments
General Objective 2.0: Appreciate market structure and marketing strategies in relation to transport industry						
3-4	2.1 Define market structures and marketing strategies 2.2 Explain the features of market structure in relation to transport industry	Explain markets and market structures Explain the features of market structure in relation to transport industry Explain the characteristics	Textbooks, Financial Reports, Annual Reports			Explain the characteristics of competition in transport markets

	<p>2.3 Explain the characteristics of competition in transport markets</p> <p>2.4 Explain the roles of marketing in transport industry</p> <p>2.5 Explain marketing strategy in transport business</p> <p>2.6 Identify the challenges of transport markets</p>	<p>of competition in transport markets</p> <p>Discuss the challenges of transport markets</p> <p>Explain the roles of marketing in transport industry</p> <p>Explain marketing strategy in transport business</p>				<p>Explain the roles of marketing in transport industry</p>
General Objective 3.0: Comprehend investment appraisal for decision making in transport enterprise						
5-6	<p>3.1 Describe the accounting rate of return and payback period as methods of investment appraisal</p> <p>3.2 Explain the principles of Discounted Cash Flows (DCF).</p> <p>3.3 Explain the meaning of Net Present Value, Internal Rate of Return (IRR) of an Investment</p> <p>3.4 Determine the Net Present Value(NPV) and Internal Rate of Return of an Investment;</p> <p>3.5 Explain the use of NPV</p>	<p>Discuss the accounting rate of return and payback period as methods of investment appraisal</p> <p>Explain the principles of Discounted Cash Flows (DCF).</p> <p>Explain the meaning of Net Present Value, Internal Rate of Return (IRR) of an Investment</p> <p>Determine the Net Present Value(NPV) and Internal Rate of Return of an Investment;</p>	<p>Relevant Multimedia presentation, Textbooks Journals, Publications on transport and project planning</p>			<p>Distinguish between Net Present Value and Internal Rate of Return (IRR) of a transport investment</p>

	and IRR in an transport investment	Explain the use of NPV and IRR in an transport investment				
General Objective 4.0: Appreciate Public-Private Partnerships for the provision of transport infrastructure						
7-8	4.1 Define Transport infrastructure and Public Private Partnership 4.2 Outline legal and regulatory frameworks for the provision of transport infrastructure 4.3 Explain procurement and quality control 4.4 Discuss the peculiarity of PPP tenders and process for Contracts	Explain Transport infrastructure and Public Private Partnership Discuss legal and regulatory frameworks for the provision of transport infrastructure Explain procurement and quality control Discuss the peculiarity of PPP tenders and process for Contracts	Textbooks, Financial Reports, Annual Reports Manuals Journals Monograph			Appraise the roles of PPP in the provision of transport infrastructure
General Objective 5.0: Analyze the risks and uncertainty in transport finance and investments						
9-10	5.1 Define risk and uncertainty 5.2 Outline risk and uncertainty in transport finance and investment 5.3 Explain the significance of Risks and uncertainty 5.4 Describe risks and	i. Explain risk and uncertainty ii. Explain risk and uncertainty in transportation finance and investment iii. Discuss the significance of Risk and uncertainty	Textbooks, Financial Reports, Annual Reports, Journals			Discuss risks and uncertainty mitigation and adaptation methods

	<p>uncertainty mitigation and adaptation methods</p> <p>5.5 Explain the principles of insurance in transport finance and investments</p>	<p>iv. Explain risk and uncertainty mitigation and adaptation methods</p> <p>v. Explain principles of insurance in transport finance and investments</p>				
--	--	--	--	--	--	--

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: QUANTITATIVE TECHNIQUES IN TRANSPORT	Code: TPM 314	Credit Hour: 2 Credit Unit:2
	Pre-requisite:	Theoretical: 2 hours/week
Year:1 Semester: 1		Practical 0 : hours/week
Goal: The course is intended to equip the students with quantitative and analytical skills to interpret transport data and make Logical decisions		
General Objectives:		
On completion of this course, the student should be able to:		
1.0 Comprehend empirical frequency distributions		
2.0 Apply discrete random variables and probability distributions		
3.0 Apply sampling distributions		
4.0 Undertake statistical investigation		
5.0 Apply statistical decision procedures		
6.0 Estimate variation, model building and forecasting analysis		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT						
COURSE TITLE: QUANTITATIVE TECHNIQUES IN TRANSPORT			COURSE CODE: TPM 314	CONTACT HOURS: 2-0-0		
GOAL: The course is intended equip the students with quantitative and analytical skills to interpret transportation data and make logical decisions						
COURSE SPECIFICATION:		THEORETICAL CONTENTS		PRACTICAL CONTENTS		
General objective 1.0 Comprehend empirical frequency distributions						
WEEK	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
1-2	1.1 Explain frequency distributions and graph 1.2 Explain weighted arithmetic means 1.3 Describe measures of central tendency 1.4 Explain measures of dispersions	i. Explain frequency distributions and graphical presentations ii. Calculated weighted arithmetic means iii. Solve problems on mean, median and mode of group and ungrouped data iv. Solve problems on range, standard deviation, variance and coefficient of variation.	Books Journals Calculator Pencil, ruler, graph books.		i.	Compute measures of central tendency Differentiate between measures of central tendency and measures of dispersions
General Objective 2.0: Apply discrete random variables and probability distributions						
3	2.1 Explain discrete random variables 2.2 Explain probability distributions 2.3 Explain the fundamental probability	Explain discrete random variables Explain probability distributions Explain the fundamental probability rules.	Books Journals Magazines			Explain probability distributions Explain Binomial

	<p>rules.</p> <p>2.4 Explain Bayes' Theorem</p> <p>2.5 Explain probability distributions of discrete random variables</p> <p>2.6 Explain Binomial distributions</p> <p>2.7 Explain Poisson distribution</p>	<p>Apply Bayes' Theorem</p> <p>Explain probability distributions of discrete random variables</p> <p>Explain Binomial distributions</p> <p>Explain Poisson distribution</p>				distributions
General Objective 3.0: Apply sampling distributions						
4-5	<p>3.1 Define sampling</p> <p>3.2 Explain the methods of sampling</p> <p>3.3 Explain sampling distribution of number of occurrences</p> <p>3.4 Explain sampling distribution of a population</p> <p>3.5 Analyze continuous distributions</p> <p>3.6 Analyze Normal distributions</p>	<p>Explain sampling</p> <p>Explain the methods of sampling</p> <p>Explain sampling distribution of number of occurrences</p> <p>Explain sampling distribution of a population</p> <p>Explain continuous distributions</p> <p>Discuss Normal distributions</p>	<p>Books</p> <p>Journals</p> <p>Magazines</p>			<p>Explain in details the methods of sampling in a transport research</p>
General Objective 4.0: Undertake statistical investigation						
6-7	4.1 Explain the	Explain the Formulation of	Books			Investigate

	<p>Formulation of a research problem</p> <p>4.2 Explain the design of a statistical investigation</p> <p>4.3 Explain the formulation of research methodology</p> <p>4.4 Explain types and sources of data for a research</p> <p>4.5 Explain the methods of data analysis and presentation</p>	<p>a research problem</p> <p>Explain the design of a statistical investigation</p> <p>Explain the formulation of research methodology</p> <p>Explain types and sources of data for a research</p> <p>4.6 Explain the methods of data analysis and presentation</p>	<p>Journals</p> <p>Magazines</p> <p>CILT</p> <p>Transport Focus Bulletin</p>			<p>transport problems in a city centre</p>
<p>General Objective 5.0: Apply statistical decision procedures</p>						
	<p>5.1 Define hypothesis</p> <p>5.2 Explain rationales and procedures of hypothesis testing</p> <p>5.3 Explain hypothetical errors.</p> <p>5.4 Explain one-sample tests and two-sample tests</p>	<p>i. Explain the meaning of hypothesis</p> <p>ii. Explain rationales and procedures of hypothesis testing</p> <p>iii. Explain type I and Type II errors, critical regions and error treatment</p> <p>iv. Explain one-sample tests (large samples); two-sample tests (large samples);t-distribution-</p>	<p>Books</p> <p>Journals</p> <p>Magazines</p> <p>CILT</p> <p>Transport Focus Bulletin</p>			<p>Explain rationales and procedures of hypothesis testing</p>

		population standard deviation (unknown); t-test for paired observations etc				
General Objective 6.0: Estimate variation, model building and forecasting analysis						
10-14	6.1 Explain the attributes of parametric and non-parametric analysis 6.2 Explain Chi-Square test and analysis of variance 6.3 Explain Regression and Correlation Analysis 6.4 Explain Time Series Analysis	Explain the attributes of parametric and non-parametric analysis Explain Chi-Square test and analysis of variance Explain Regression and Correlation Analysis Explain Time Series Analysis	Books Journals Magazines CILT Transport Focus Bulletin			Differentiate between parametric and non-parametric statistics

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: INTEGRATED TRANSPORT PLANNING AND OPERATIONS	Code: TPM 315	Credit Hour: 2 Credit Unit:2
	Pre-requisite:	Theoretical: 2 hours/week
Year:1 Semester: 1		Practical 0 : hours/week
Goal: The course is to enable students develop knowledge in inter-modal and multi-modal public transport planning and operations.		
General Objectives:		
<p>On completion of this course, the student should be able to:</p> <ol style="list-style-type: none"> 1.0 Comprehend the meaning and nature of integrated transport planning and operations 2.0 Apply contemporary issues in multimodal transport planning 3.0 Appreciate the governance and equity of transport 4.0 Apply multimodal planning concepts and process 5.0 Evaluate transport, land use and urban form 6.0 Analyze travel patterns and behavior 7.0 Analyze transport demand management 		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT						
COURSE TITLE: INTEGRATED TRANSPORT PLANNING & OPERATIONS				COURSE CODE: TPM 315	CONTACT HOURS: 2-0-0	
GOAL: The course is to enable students develop knowledge in inter-modal and multi-modal transport planning and operations						
COURSE SPECIFICATION:		THEORETICAL CONTENTS		PRACTICAL CONTENTS		
General objective 1.0: Comprehend the meaning and nature of integrated transport planning and operations						
WK	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
1-2	1.1 Define integrated transport and transport planning 1.2 Define multimodal and intermodal transport 1.3 Compare public transit modes 1.4 Explain the importance of integrated transport planning and operations.	i. Explain the nature and scope of integrated transport in transport planning ii. Discuss scope and nature of multimodal and intermodal transport iii. Compare public transit modes and explain their merits and demerits iv. Discuss the importance of integrated transport planning and operations in the society	Textbook; journals and periodicals PowerPoint presentations			Differentiate between multimodal and intermodal transport Appraise the importance of integrated transport planning and operations
General Objective 2.0: Apply contemporary issues in multimodal transport planning						
3-4	2.1 Define multimodal transport planning	Explain multimodal transport planning	Textbook; journals and			Discuss the contemporar

	2.2 Explain multi-modal transportation planning concepts 2.3 Appraise contemporary issues in multimodal transport planning.	2.2 Explain multi-modal transportation planning concepts 2.3 Appraise contemporary issues in multimodal transport planning.	periodicals			Key issues in multimodal transport planning.
General Objective 3.0: Appreciate the governance and equity of transport						
5-6	3.1 Define transport governance 3.2 Explain the roles of stakeholders involved in transport planning. 3.3 Explain the laws, functions and processes of transport organisation 3.4 Appraise political and institutional issues affecting transport planning. 3.5 State strategy for social equity through multimodal transport planning	i. Explain transport governance 3.2 Explain the roles of stakeholders involved in transport planning. 3.3 Explain the laws, functions and processes of transport organisation 3.4 Appraise political and institutional issues affecting transport planning. 3.5 State strategy for social equity through multimodal transport planning	Textbook; journals and periodicals			Discuss the roles of stakeholders involvement in transport planning
General Objective 4.0: Apply multimodal planning concepts and process						

7-8	<p>4.1 Explain concepts and characteristics of conventional transport planning</p> <p>4.2 Describe the types of multimodal transport operations</p> <p>4.3 Explain the contemporary issues in multimodal transport operations</p> <p>4.4 Explain the importance of regional and intergovernmental coordination in multimodal transport operations</p>	<p>i. Explain concepts and characteristics of conventional transport planning</p> <p>4.2 Describe the types of multimodal transport operations</p> <p>4.3 Explain the contemporary issues in multimodal transport operations</p> <p>4.4 Explain the importance of regional and intergovernmental coordination in multimodal transport operations</p>	Textbook; journals and periodicals			Explain the contemporary issues in multimodal transport operations
General Objective 5.0: Evaluate transport, land use and urban form						
9-10	<p>5.1 Explain the relationship between transport and land use</p> <p>5.2 Describe the tools used to connect transport, land use and urban form</p> <p>5.3 Explain the influence of land use and transport planning practices on urban form</p>	<p>i. Explain the relationship between transport and land use</p> <p>5.2 Describe the tools used to connect transport, land use and urban form</p> <p>5.3 Explain the influence of land use and transport planning practices on urban form</p>	Textbook; journals and periodicals			<p>Appraise the influence of changes in the built environment on travel behavior</p> <p>Discuss the relationship</p>

	5.4 Analyze the relative influence of changes in the built environment on travel behavior 5.5 Explain the tools used to transit developed communities from auto-centric to multimodal mobility	5.4 Analyze the relative influence of changes in the built environment on travel behavior 5.5 Explain the tools used to transit developed communities from auto-centric to multimodal mobility				between land use and transport planning
General Objective 6.0: Analyze travel patterns and behavior						
11-12	6.1 Define travel pattern and behavior 6.2 Explain theory of travel behavior 6.3 Compare theoretical and observed behavior 6.4 Analyze trends in travel pattern and factors influencing travel behavior. 6.5 Explain land use and transport management strategies	1 Explain travel pattern and behavior 6.2 Explain theory of travel behavior 6.3 Compare theoretical and observed behavior 6.4 Analyze trends in travel and factors influencing travel pattern and behavior. 6.5 Explain land use and transport management strategies	Textbook; journals and periodicals			Analyze trends in travel pattern and factors influencing travel behavior.

General Objective 7.0: Analyze transport demand management						
13-14	<p>7.1 Describe the nature and profile of transport options</p> <p>7.2 Define transport demand management</p> <p>7.3 Know collaborative consumption models</p> <p>7.4 Know transport system management and operations</p> <p>7.5 Identify methods to manage multimodal transport system demand and potential benefits</p>	<p>i. Explain the nature and profile of transportation options-Non-motorised transportation, Public transit, Paratransit and non-motorised transportation</p> <p>ii. Explain transportation demand and management</p> <p>iii. Explain collaborative consumption models- car sharing, bike sharing, Bikeshare, Carshare</p> <p>iv. Know transportation system management and operations- ITS adaptive signals; Bluetooth detection; Open-source multimodal trip planning</p> <p>v. Explain methods to manage multimodal transportation system demand and potential benefits</p>	Textbook; journals and periodicals			Discuss the relevance of TDM in transport planning and management

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: TRANSPORT PLANNING II	Code: TPM 316	Credit Hour: 3 Credit Unit:2
	Pre-requisite:	Theoretical: 2 hours/week
Year:1 Semester: 1		Practical 1 : hours/week
Goal: The course is designed to give students knowledge on the purpose and importance of transport planning.		
General Objectives: On completion of this course, the student should be able to: <ol style="list-style-type: none"> 1.0 Comprehend the key issues of transport planning 2.0 Apply travel survey methods to address transport planning issues 3.0 Apply trip demand forecasting models and estimation methods 4.0 Prepare Parking and Traffic Impact Assessment (TIA) Report 5.0 Comprehend the components of public transport systems 6.0 Evaluate public transport systems performance in transport planning 7.0 Apply transport policy for government intervention in transport planning 		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT						
COURSE TITLE: TRANSPORT PLANNING II				COURSE CODE: TPM 316	CONTACT HOURS: 0-0-0	
GOAL: The course is to deepen the knowledge of students on the purpose and importance of transport planning						
COURSE SPECIFICATION:		THEORETICAL CONTENTS		PRACTICAL CONTENTS		
General objective 1.0: Comprehend the key issues of transport planning						
WK	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
1	1.1 Define transport planning concept 1.2 Explain the importance of transport planning 1.3 Explain Transport Planning Process 1.4 Describe the functions and constraints of transport planning organizations 1.5 Explain the nature of urban accessibility and mobility	i. Explain transport planning concept 1.2 Explain the importance of transport planning 1.3 Explain Transport Planning Process 1.4 Describe the functions and constraints of transport planning organizations 1.5 Explain the nature of urban accessibility and mobility	Textbook; journals and periodicals PowerPoint presentation	Carry out a transport planning process	Guide students through the transport planning process	Describe the functions and constraints of transport planning organizations
General Objective 2.0: Apply travel survey methods to address transport planning issues						
2-3	2.1 Explain travel survey process 2.2 Explain the rationales for travel and traffic survey 2.3 Analyze the techniques for travel and traffic survey	i. Explain travel survey process 2.2 Explain the rationales for travel and traffic survey 2.3 Analyze the techniques for travel and traffic survey	Textbook; journals and periodicals Manual counter; writing	Conduct travel and traffic survey	Guide students to conduct travel and traffic survey	Analyze the techniques for travel and traffic survey

	2.4 Appraise traffic Data sources, processing and interpretation	2.4 Appraise traffic Data sources, processing and interpretation	materials Survey tools			
General Objective 3.0: Apply trip demand forecasting models and estimation methods						
4-5	3.1 Explain trip generation model: Multiple linear regression and Category analysis 3.2 Explain trip distribution - Growth factor methods and Gravity model method 3.3 Explain Modal split - Trip end models; Trip interchange model and Discrete choice model 3.4 Explain traffic assignment-All-or-nothing assignment, Incremental assignment, and Equilibrium assignment	Explain trip generation model: Multiple linear regression and Category analysis 3.2 Explain trip distribution - Growth factor methods and Gravity model method 3.3 Explain Modal split - Trip end models; Trip interchange model and Discrete choice model 3.4 Explain traffic assignment-All-or-nothing assignment, Incremental assignment, and Equilibrium assignment	Textbook; journals and periodicals			Discuss trip generation, trip distribution, modal split-end models and traffic assignment
General Objective 4.0: Prepare Parking and Traffic Impact Assessment (TIA) Report						
6-7	4.1 Define parking and TIA 4.2 Explain parking types and characteristics in a typical urban area 4.3 Explain the importance of	Define parking and TIA 4.2 Explain parking types and characteristics in a typical urban area 4.3 Explain the importance	Textbook; journals and periodicals	Prepare of parking and Traffic Impact Assessment technical report	Guide the students to prepare parking and Traffic Impact	Discuss the contents of parking and TIA Report

	<p>parking and TIA</p> <p>4.4 Explain the contents of parking and TIA Report</p> <p>4.5 Explain the relationship between TIA and transport planning</p> <p>4.6 Apply Legal and statutory frameworks for TIA</p>	<p>of parking and TIA</p> <p>4.4 Explain the contents of parking and TIA Report</p> <p>4.5 Explain the relationship between TIA and transport planning</p> <p>4.6 Apply Legal and statutory frameworks for TIA</p>			assessment technical report	
General Objective 5.0: Comprehend the components of public transport systems						
8-9	<p>5.1 Define public transport system and classification</p> <p>5.2 Explain planning for public transit and transport alternatives</p> <p>5.3 Explain the features of public transport, bus transit-system, technology and operation</p> <p>5.4 Explain the features of rail rapid transit-system, technology and operation</p> <p>5.6 Explain the features of Ferry transit- System, technology and operation</p>	<p>Define public transport system and classification</p> <p>5.2 Explain planning for public transit and transport alternatives</p> <p>5.3 Explain the features of public transport, bus transit- system, technology and operation</p> <p>5.4 Explain the features of rail rapid transit-system, technology and operation</p> <p>5.6 Explain the features of Ferry transit- System, technology and operation</p>	Textbook; journals and periodicals			Explain planning for public transit and transport alternatives
General Objective 6.0:						

10-11						
General Objective 6.0: Evaluate public transit system performance						
12	6.1 Explain the methods of performance evaluation 6.2 Explain the key performance indicators for public transport 6.3 Analyse transit capacity, frequency and headway 6.4 Analyse the quality of transit service	Explain the methods of performance evaluation 6.2 Explain the key performance indicators for public transport 6.3 Analyse transit capacity, frequency and headway 6.4 Analyse the quality of transit service	Textbook; journals and periodicals			Present individual case study on transit service performance
General Objective 7.0: Apply transport policy for government intervention in transport planning						
13-14	7.1 Define Transport Policy 7.2 Explain rationales for government's intervention in transport planning 7.3 Appraise the nature of government intervention 7.4 Evaluate National Transport Policy	Explain Transport Policy 7.2 Explain rationales for government's intervention in transport planning 7.3 Appraise the nature of government intervention 7.4 Evaluate National Transport Policy	Textbook; journals and periodicals			Explain the content of National Transport Policy

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: TRANSPORT AND ENVIRONMENT	Code: TPM 317	Credit Hour: 2 Credit Unit:2
	Pre-requisite:	Theoretical:2 hours/week
Year:1 Semester: 1		Practical 0 : hours/week
Goal: The course is to provide students with the required knowledge to understand the interrelationships of the environment and transport system		
General Objectives:		
On completion of this course, the student should be able to:		
1.0 Trace the historical attempt at protecting the environment and its resources for sustainable development		
2.0 Analyze the Environmental Impact Assessment (EIA) of transport system		
3.0 Comprehend the counterproductive nature of transport externalities on the environment		
4.0 Appreciate the responsibilities of the institutional frameworks for environmental protection and management		
5.0 Appraise the connection between Transport, Health and Climate Change		
6.0 Analyze the emerging transport technologies for environmental protection and sustainability		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT						
COURSE TITLE: TRANSPORTATION AND ENVIRONMENT				COURSE CODE: TPM 317	CONTACT HOURS: 0-0-0	
GOAL: The course is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the environment and transportation system						
COURSE SPECIFICATION:		THEORETICAL CONTENTS		PRACTICAL CONTENTS		
WK	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
General Objective 1.0: Trace the historical attempt at protecting the environment and environmental movements						
3-4	1.1 Explain environment, environmental resources, their classifications and importance 1.2 Explain the goal and factors influencing environmental movements 1.3 Appraise the environmental protection movements in the developed world 1.4 Appraise the evolution of environmental protection in Nigeria 1.5 Outline the prospects and consequences of man exploitation of the environment	Explain environment, environmental resources, their classifications and importance 1.2 Explain the goal and factors influencing environmental movements 1.3 Explain the environmental protection movements in the developed world 1.4 Explain the evolution of environmental protection in Nigeria Outline the prospects and consequences of man exploitation of the environment	Textbook; Journals periodicals Monograph Research report Magazines Websites			Explain the impact of human activities on the sustainability of the environment
General Objective 2.0: Analyze the Environmental Impact Assessment (EIA) of transport system						

7-8	2.1 Define Environmental Impact Assessment (EIA) 2.2 Explain the requirements for preparing EIA 2.3 Explain the importance of EIA for transport projects 2.4 Explain the contents of EIA Report 2.5 Evaluate EIA reports	Explain Environmental Impact Assessment (EIA) 2.2 Explain the requirements for preparing EIA 2.3 Explain the importance of EIA for transport projects 2.4 Explain the contents of EIA Report 5 Evaluate EIA reports	Textbook; journals and periodicals (EIA) Research Reports			Discuss the importance of Environmental Impact Assessment (EIA) for a transport project
General Objective 3.0: Comprehend the counterproductive nature of transport externalities on the environment						
9-10	3.1 Explain transport externalities 3.2 Explain the consequences and counterproductive measures of transport externalities on the environment 3.3 Appraise the roles of transport in Climate Change	Explain transport externalities Explain the consequences and remedial measures of transport externalities on the environment Appraise the roles of transport in Climate Change	Textbook; Journals and periodicals PowerPoint presentation			Explain the consequences and counterproductive measures of transport externalities on the environment
General Objective 4.0: Appreciate the responsibilities of the institutional frameworks for environmental protection and management						
11-12	4.1 Explain the institutional framework for environmental	Explain the institutional framework for	Textbook; journals and			Discuss the institutional

	<p>protection in the world and Nigeria.</p> <p>4.2 Appraise the constraints confronting the institutions in 4.1above</p> <p>4.3 Explain the objectives of Nigeria's Agenda 21</p>	<p>environmental protection in the world and Nigeria.</p> <p>Appraise the constraints confronting the institutions in 4.1above</p> <p>Explain the objectives of Nigeria's Agenda 21</p>	periodicals			framework for environmental protection in Nigeria.
General Objective 5.0: Appraise the connection between Transport, Health and Climate Change						
13-14	<p>5.1 Explain the terms: climate and climate change</p> <p>5.2 Explain the endangered Species in the habitat</p> <p>5.3 Appraise health impacts of transport system</p> <p>5.4 Appraise the functions of Intergovernmental Panel on Climate Change (IPCC)</p>	<p>Explain the terms: climate and climate change</p> <p>Explain the endangered Species in the habitat</p> <p>Appraise health impacts of transport system</p> <p>Appraise the functions of Intergovernmental Panel on Climate Change (IPCC)</p>	Textbook; journals and periodicals			Discuss the relationship between transport and climate change
General Objective 6.0: Analyze the emerging transport technologies for environmental protection and sustainability						
	<p>6.1 Explain environmental sustainability</p> <p>6.2 Explain urban design</p> <p>6.3 Appraise emerging transport technologies</p> <p>6.4 Explain the benefits and shortcomings of the</p>	<p>i. Discuss environmental sustainability</p> <p>ii. Discuss the concept of urban design- Compact growth, transit oriented development, and vehicles miles traveled</p>				Explain the benefits and shortcomings of the emerging transport technologies

	technologies	<p>iii. Discuss the emerging transport technologies- biofuels, LNG, Catalytic converter, laminated windscreen; collapsible steering; hybrid vehicles; public transit; active transport means</p> <p>iv. Explain the benefits and shortcomings of the technologies</p>				Explain the concepts of environmental sustainability
--	--------------	---	--	--	--	--

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: RAIL TRANSPORT OPERATIONS AND MANAGEMENT	Code: TPM 318	Credit Hour: 2 Credit Unit:2
	Pre-requisite:	Theoretical: 2 hours/week
Year:1 Semester: 1		Practical 0 : hours/week
Goal: The course is to provide students with the knowledge and skills required to carry out rail transport operations and management		
General Objectives:		
On completion of this course, the student should be able to:		
1.0 Comprehend the development of rail transport		
2.0 Appreciate the nature of railway operations and management		
3.0 Analyze the components of rail system and standards		
4.0 Appreciate train planning, operation and performance management		
5.0 Analyze occupational hazards, health and safety measures in rail operations		
6.0 Comprehend principles of railway economics		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT						
COURSE TITLE: RAIL OPERATIONS AND MANAGEMENT				COURSE CODE: TPM 318	CONTACT HOURS: 0-0-0	
GOAL: The course is to provide students with the knowledge and skills required to carry out rail transport operations and management						
COURSE SPECIFICATION:		THEORETICAL CONTENTS		PRACTICAL CONTENTS		
General objective 1.0: Comprehend the development of rail transport						
WK	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
1-2	1.1 Explain the features and characteristics of rail transport 1.2 Explain infrastructure and operational requirements of rail transport 1.3 Trace the development of rail transport in Nigeria and the world	Explain the features and characteristics of rail transport 1.2 Explain infrastructure and operational requirements of rail transport 1.3 Trace the development of rail transport in Nigeria and the world	Textbook; journals and periodicals Monographs PowerPoint presentation			Discuss the evolution of rail transport in Nigeria

General Objective 2.0: Appreciate the nature of railway operations and management						
3-4	2.1 Explain the management skills in railway operations 2.2 Appraise the nature of railway business organisation 2.3 Explain railway operating principles 2.4 Explain train movement & control systems 2.5 Explain the nature of rail passenger and freight services	Explain the management skills in railway operations 2.2 Appraise the nature of railway business organisation 2.3 Explain railway operating principles 2.4 Explain train movement & control systems 2.5 Explain the nature of rail passenger and freight services	Textbook; journals and periodicals Monographs PowerPoint presentation			Discuss the nature of rail passenger and freight services
General Objective 3.0: Analyze the components of rail system and standards						
5-6	3.1 Explain the components of rail system 3.2 Explain the standards of rail components 3.3 Analyze the functions of each component of the rail system 3.4 Explain the maintenance procedure of each component of the rail system	Explain the components of rail system 3.2 Explain the standards of rail components 3.3 Analyze the functions of each component of the rail system 3.4 Explain the maintenance procedure of each component of the rail system	Textbook; journals and periodicals PowerPoint presentation, video player & projector			Appraise the functions of the component of the rail transport system

General Objective 4.0: Appreciate train planning, operation and performance management						
7-8	4.1 Explain train planning and operation 4.2 Explain train performance management 4.3 Explain operational planning	Explain train planning and performance management- timetable construction, types of train planning , types of train services, infrastructure implications. Explain train performance management 4.3 Explain operational planning	Textbook; journals and periodicals			Discuss train performance management
General Objective 5.0: Analyze occupational hazards, health and safety measures in rail operations						
9-10	5.1 Analyze health, hazard and safety risks in rail operations 5.2 Explain the provisions for safety on the railway 5.3 Interpret general health and safety legislation. 5.4 Explain the duties of the employer 5.5 Explain the approved codes of practice and safety regulations	Analyze health, hazard and safety risks in rail operations 5.2 Explain the provisions for safety on the railway 5.3 Interpret general health and safety legislation. 5.4 Explain the duties of the employer 5.5 Explain the approved codes of practice and safety regulations	Textbook; journals and periodicals PowerPoint presentation			Discuss the provisions for safety on the railway

General Objective 6.0: Comprehend the principles of railway economics						
11-12	6.1 Explain the importance of economics to railway business and operations 6.2 Analyze railway costs components 6.3 Explain railway sources of revenues and investments 6.4 Appraise investment risk in railway business	1 Explain the importance of economics to railway business and operations 6.2 Analyze railway costs components 6.3 Explain railway sources of revenues and investments 6.4 Appraise investment risk in railway business	Textbook; journals and periodicals			Discuss sources of revenues and investments in railway business

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: STUDIO V: TRANSPORT PLANNING DESIGN V (RAIL TERMINAL FACILITY PLANNING AND DESIGN)	Code: TPM 319	Credit Hour: 3 Credit Unit:3
	Pre-requisite:	Theoretical:1 hours/week
Year:1 Semester: 1		Practical 2 : hours/week
Goal: This course is designed to provide students with the appropriate skills to plan, design and inspect rail terminal facilities		
General Objectives:		
<p>On completion of this course, the student should be able to:</p> <ol style="list-style-type: none"> 1.0 Comprehend rail terminal facilities 2.0 Describe the inspection of rail network, railway yard, terminal building and other ancillary facilities 3.0 Apply safety regulation and rules on facilities within the rail terminal 4.0 Appraise the components of rail terminal facility and the considerations of planning and design factors 5.0 Interpret layout design, maps and master plan for rail terminal facility according to given constraints 6.0 Appreciate push-back, taxi operation, arrival and departure times 		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT						
COURSE TITLE: : STUDIO V: TRANSPORT PLANNING DESIGN V (RAIL TERMINAL FACILITY PLANNING AND DESIGN)			COURSE CODE: TPM 319		CONTACT HOURS: 3	
Goal: This course is designed to provide students with the appropriate skills to plan, design and inspect rail terminal facilities						
COURSE SPECIFICATIONS: THEORETICAL CONTENTS				PRACTICAL CONTENTS		
Specific Learning Objective 1.0: Comprehend rail terminal facilities.						
Week	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
1.	1.1 Explain the Characteristics of rail terminal facilities. 1.2 Explain the Functions of rail terminal facilities. 1.3 Apply spatial planning requirements for rail terminal facility planning and design	1.4 Explain the Characteristics of rail terminal facilities. 1.5 Explain the Functions of rail terminal facilities. 1.6 Apply spatial planning requirements for rail terminal facility planning and design	Books Journals Magazines CILT/CIoTA Bulletin			Discuss the Characteristics of rail terminal facilities.
General Objective 2.0: Describe the inspection of rail network, railway yard, terminal building and other ancillary facilities						
2	2.1 Explain the Methods and Process of Inspecting rail station, facilities and other Terminal Facilities	Explain the methods and process of inspecting rails stations, terminus and building and other terminal Facilities.	Books Journals Manuals Base Maps Drawing Materials	Carry out the process of inspecting rail station, buildings and facilities	Guide students through the process of inspecting rail station, buildings and facilities	

			Cameras GPS etc.			
General Objective 3.0: Apply safety regulation and rules on facilities within the rail terminal .						
3	3.1 Apply safety, regulation rules on rail terminal facilities 3.2 Explain types of natural disaster that affect rail infrastructure	Apply safety, regulation rules on rail terminal facilities Explain types of natural disaster that affect rail infrastructure	Books Journals Magazines CILT/CIoTA Bulletin	Demonstrate the usage of Personal Protective Equipment (PPEs)	Guide students to use the PPEs	Discuss safety, regulation rules on rail terminal facilities
General Objective 4.0: Appraise the components of rail terminal facility and the considerations of planning and design factors						
4	4.1 Explain the components of rail terminal design. 4.2 Explain the factors that influence rail terminal design 4.3	4.4 Explain the components of rail terminal design. 4.5 Explain the factors that influence rail terminal design	Books Journals Magazines CILT/CIoTA Bulletin			Explain the factors that influence rail terminal design
General Objective 5.0: Interpret layout design, maps and master plan for rail terminal facility according to given constraints						
5	5.1 Explain the Plan, Design 5.2 Interpret layout design, maps and master plan for rail terminal.	Explain the Plan, Design Interpret layout design, maps and master plan for rail terminal.	Books Journals Magazines Manuals CILT/CIoTA Bulletin Drone,	5.1 Prepare plan design and interpret Layout, master plan, and maps for a rail terminal.	i. Guide students to prepare and interpret a Layout, master plan, and maps for a rail terminal	

			Base Maps, GPS, GIS, TransCAD, Cameras Manuals			
General Objective 6.0: Appreciate push-back, taxi operation, arrival and departure times						
6	6.1 Appraise the pushback and taxi Operation in rail facility Design. 6.2 Analyze the arrival and departure time of a train operation	Appraise the push-back and taxi Operation in rail facility Design. Analyze the arrival and departure time of a train operation	Books Journals			Appraise the push-back and taxi Operation in rail facility Design.

YEAR 1 SEMESTER 2

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: TRAFFIC ENGINEERING	Code: TPM 321	Credit Hour: 3 Credit Unit:2
	Pre-requisite:	Theoretical:2 hours/week
Year:1 Semester: 2		Practical 1 : hours/week
Goal: This course is designed to provide students with the knowledge and skills required to operate and manage traffic and intelligent transport systems (ITS)		
General Objectives: On completion of this course, the student should be able to: 1.0 Analyze the physical, socio-economic and environmental considerations and elements of rail/road design 2.0 Analyze rail/road capacity, quality of flow and factors affecting rail/road planning and management 3.0 Comprehend rail/road traffic furniture 4.0 Explore intelligent transport system (ITS) and its influence on users travel behaviour 5.0 Appreciate traffic and drivers information as well as traffic flow theory 6.0 Comprehend road design and alignment, construction materials and methods (delete)		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT		
COURSE TITLE: TRAFFIC ENGINEERING	COURSE CODE: TPM 321	CONTACT HOURS: 3
Goal: This course is designed to provide students with the knowledge and skills required to operate and manage traffic and intelligent		

transport systems (ITS)						
COURSE SPECIFICATIONS: THEORETICAL CONTENTS				PRACTICAL CONTENTS		
Specific Learning Objective 1.0: Understand Rail/Road Transport Planning and Traffic Survey						
Week	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
General Objective 1.0: Analyze the physical, socio-economic and environmental considerations and elements of rail/road design						
2	<p>1.1 Explain traffic engineering and its importance</p> <p>1.2 Explain the physical, socio-economic and environmental factors and considerations influencing the design of railway and highway.</p> <p>1.3 Explain the elements in designing railway and highway.</p>	<p>Explain the physical, socio-economic and environmental factors and considerations influencing the design of railway and highway.</p> <p>Explain the elements in designing railway and highway.</p>	<p>Books</p> <p>Journals</p> <p>Magazines</p> <p>CILT/CIoTA Bulletin</p> <p>Websites</p>			<p>Discuss the factors influencing the design of railway and highway.</p>
General Objective 3.0 Analyze rail/road capacity, quality of flow and factors affecting rail/road planning and management						
3	<p>3.1 Analyze the existing and proposed railway, urban road and highways capacity.</p> <p>3.2 Explain the quality of flow on roads and railways.</p> <p>3.3 Explain the factors affecting rail/road planning, construction,</p>	<p>3.1 Analyze the existing and proposed railway, urban road and highways capacity.</p> <p>3.2 Explain the quality of flow on roads and railways.</p> <p>Explain the factors affecting rail/road</p>	<p>Books</p> <p>Journals</p> <p>traffic counter</p>	<p>Demonstrate how the traffic flow on roads and railways is determined and interpreted</p>	<p>Guide students on how to determine traffic flow and interpret its analysis</p>	<p>Discuss the factors affecting rail/road planning, construction, and management.</p>

	and management.	planning, construction, and management.				
--	-----------------	--	--	--	--	--

General Objective 3.0: Comprehend rail/road traffic furniture						
4	3.1 Explain rail/road traffic furniture 3.2 Describe the importance of rail/road traffic furniture 3.3 Explain the implications of rail/road furniture on transport planning and management.	Explain traffic furniture Describe the importance of rail/road traffic furniture Explain the implications of rail/road furniture on transport planning and management.	Books Journals Magazines Engineering Manuals CILT/CIoTA Bulletin			Discuss the implications of rail/road furniture on transport planning and management.
General Objective 4.0: Explore intelligent transport system (ITS) and its influence on users travel behaviour						
5	4.1 Define intelligent transport system (ITS) 4.2 Explain the type of intelligent transport system devices in transport engineering. 4.3 Appraise the impact and relevance of ITS devices on users travel behaviour.	4.4 Define intelligent transport system (ITS) 4.5 Explain the type of intelligent transport system devices in transport engineering. Appraise the impact and relevance of ITS devices on users travel behaviour.	Books Journals Magazines CILT/CIoTA Bulletin			Discuss the impact and relevance of ITS devices on users travel behaviour.
General Objective 5.0: Appreciate traffic and drivers information as well as traffic flow theory						
7	5.1 Explain the meaning and constituent of traffic and drivers information.	6.1 Explain the meaning and constituent of traffic and drivers	Books Journals Books Journals			Discuss the relevance of traffic flow theory in traffic

	5.2 Explain the principles and applications of traffic flow theory 5.3 Explain the relevance of transport and traffic engineering.	information. 6.2 Explain the principles and applications of traffic flow theory Explain the relevance of transport and traffic engineering.	Magazines CILT/CIoTA Bulletin			engineering
General Objective 6.0: Comprehend road design and alignment, construction materials and methods						
8	6.1 Explain the types of road design, alignment 6.2 Explain the methods and techniques of road design 6.3 Explain the materials used in rail and road construction.	Explain the types of road design, alignment Explain the methods and techniques of road design Explain the materials used in rail and road construction.	Books Journals Books Journals Magazines CILT/CIoTA Bulletin			Explain the methods and techniques of road design

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: TRANSPORT INSURANCE	Code: TPM 322	Credit Hour:2 Credit Unit:2
	Pre-requisite:	Theoretical:2 hours/week
Year:1 Semester: 1		Practical 0 : hours/week
Goal: This course is designed to provide students with the knowledge and skills of insurance policy required in transport operation and management		
<p>General Objectives: On completion of this course, the student should be able to:</p> <ol style="list-style-type: none"> 1.0 Comprehend the meaning, functions and importance of transport insurance 2.0 Explore the insurance market and policies 3.0 Comprehend the application of the insurance concepts in transport investment 4.0 Apply the principle of contract to transport insurance 5.0 Appreciate Utmost Good Course, Proximate Cause, Indemnity, Subrogation and Contribution 		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT							
COURSE TITLE: TRANSPORT INSURANCE			COURSE CODE: TPM 322		CONTACT HOURS: 2		
Goal: This course is designed to provide students with the knowledge and skills of insurance policy required in transport operation and management							
COURSE SPECIFICATIONS: THEORETICAL CONTENTS				PRACTICAL CONTENTS			
General Objective 1.0: Comprehend the meaning, functions and importance of transport insurance							
Week	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation	
1.	1.1 Define transport insurance 1.2 Explain the functions and importance of transport insurance. 1.3 Trace the history of insurance in transport.	Define transport insurance Explain the functions and importance of transport insurance. Trace the history of insurance in transport	Books Journals Magazines CILT/CIoTA Bulletin Research Report			Discuss the functions and importance of transport insurance	
General Objective 2.0: Explore the insurance market and policies							
	2.1 Define transport insurance market and policy 2.2 Explain the various forms of transport insurance policies 2.3 Explain the functions of insurance market and their intermediaries.	2.4 Define transport insurance market and policy 2.5 Explain the various forms of transport insurance policies Explain the functions of insurance market and their intermediaries	Books Journals Magazines			Discuss the functions of insurance market and their intermediaries.	

General Objective 3.0: Comprehend the application of the insurance concepts in transport investment						
4	3.1 Explain insurance concept in transport 3.2 Explain the application of insurance concepts in transport 3.3 Explain the role of insurance in transport investment	Explain insurance concept in transport Explain the application of insurance concepts in transport Explain the role of insurance in transport investment	Books Journals Magazines CILT/CIoTA Bulletin Research Report			Discuss the role of insurance in transport investment
General Objective 4.0: Apply the principle of contract to transport insurance						
5	4.6 Explain transport insurance contract 4.7 Apply the principle of insurance contract in transport 4.8 Explain transport insurance premium	Explain transport insurance contract Apply the principle of insurance contract in transport Explain transport insurance premium	Books Journals Magazines CILT/CIoTA Bulletin Research Report			Discuss the principle of insurance contract in transport
General Objective 5.0: Appreciate Utmost Good Course, Proximate Cause, Indemnity, Subrogation and Contribution						
6	5.1 Explain the Principles of Utmost Good Course, 5.2 Explain Proximate Cause, 5.3 Explain Indemnity, 5.4 Explain Subrogation 5.5 Explain Contribution	Explain the Principles of Utmost Good Course, 5.2 Explain Proximate Cause, 5.3 Explain Indemnity, 5.4 Explain Subrogation 5.5 Explain Contribution	Books Journals Magazines CILT/CIoTA Bulletin Research Report			Discuss Indemnity, Subrogation and Contribution

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: LAW OF BUSINESS AND CARRIAGE	Code: TPM 323	Credit Hour: 2 Credit Unit:2
	Pre-requisite:	Theoretical: 2 hours/week
Year:1 Semester: 2		Practical: 0 hours/week
Goal: This course is designed to provide students with the knowledge and skills of the laws of business and carriage in transport operation		
General Objectives: On completion of this course, the student should be able to: 1.0 Comprehend the Law of Carriage of passengers, by land, sea and air 2.0 Apply transport regulations on carriage of goods by land, sea and air- 3.0 Recognize the rights and duties of a Common carrier 4.0 Appreciate the documents used in the Contract of Carriage 5.0 Apply the Law of Agency and Cabotage Law in transport operation 6.0 Explore the steps in the incorporation of a transport company		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT							
COURSE TITLE: Law of Business and Carriage			COURSE CODE: TPM 323		CONTACT HOURS: 2-0-0		
Goal: This course is designed to provide students with the knowledge and skills of the laws of business and carriage in transport operation							
COURSE SPECIFICATIONS: THEORETICAL CONTENTS				PRACTICAL CONTENTS			
General Objective 1.0: Comprehend the Law of Carriage of passengers, by land, sea and air							
Week	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation	
1.	1.1 Explain land, sea and air transport 1.2 Appraise the law of carriage of passenger by land, 1.3 Appraise the law of carriage of passenger by sea 1.4 Explain the law of carriage of passengers by air	Explain land, sea and air transport Appraise the Law of Carriage of Passenger by Land, Appraise the law of carriage of passenger by Sea Explain the law of carriage of passengers by Air	Books Journals Acts			Discuss the law of carriage of passenger by sea	
General Objective 2.0 Apply transport regulations on carriage of goods by land, sea and air							
	2.1 Explain the regulation for the Carriage of goods by land 2.2 Explain the regulation for the carriage of goods by sea 2.3 Explain the regulation for the carriage of goods by air	Explain the regulation for the Carriage of goods by Land, Explain the regulation for the Carriage of goods by sea, Explain the regulation for the Carriage of goods by air	Books Journals Magazines CILT/CIoTA Bulletin			Discuss the regulation for the carriage of goods by air	

General Objective 3.0: Recognize the rights and duties of a common carrier						
3	3.1 Define a common carrier 3.2 Explain the rights of a common carrier 3.3 Explain the duties of a common carrier	Explain a common carrier Explain the rights of a common carrier Explain the duties of a common carrier	Books Journals Magazines			Discuss the rights and duties of a common carrier
General Objective 4.0: Appreciate the documents used in the contract of carriage						
4	4.1 Define transport document 4.2 Explain the types of documents used in a transport contract 4.3 Explain the importance of the transport documents in 4.2 above	Explain a transport document Explain the types of documents used in a transport contract Explain the importance of the transport documents in 4.2 above	Books Journals Sample documents			Discuss the importance of the transport documents used in the contract of carriage
General Objective 5.0: Apply the Law of Agency and cabotage law in transport						
5	5.1 Define law of agency and cabotage 5.2 Explain the law of agency and its application in transport operation. 5.3 Explain the principles of cabotage law	Explain agency law and cabotage Explain the law of agency and its application in transport operation. Explain the principles of cabotage law	Books Journals Magazines Cabotage Act			Discuss the law of agency and its application in transport operation.
General Objective 6.0: Explore the process in the incorporation of a transport company						
	6.1 Explain company incorporation 6.2 Explain the types of incorporation of a	Explain company incorporation Explain the types of incorporation of a	Books Journals Magazines			Discuss the process of a transport company

	transport company 6.3 Explain the process of a transport company incorporation	transport company Explain the process of a transport company incorporation				incorporation
--	---	---	--	--	--	---------------

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: FREIGHT TRANSPORT PLANNING AND MANAGEMENT	Code: TPM 324	Credit Hour: 2 Credit Unit:2
	Pre-requisite:	Theoretical: 2 hours/week
Year:1 Semester: 2		Practical: 0 hours/week
Goal: The course is designed to provide students with the knowledge and skills to enable them practice freight transport planning and management		
General Objectives: On completion of this course, the student should be able to: 1.0 Appreciate freight transport systems, freight planning, freight management and vehicle maintenance. 2.0 Apply logistics management in freight planning 3.0 Apply intelligent transport system ITS to facilitate freight transport 4.0 Comprehend urban freight transport and city logistics 5.0 Recognize the roles of seaports, airports and free trade zones 6.0 Explore the factors influencing freight distribution and flow		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT		
COURSE TITLE: FREIGHT TRANSPORT PLANNING AND MANAGEMENT	COURSE CODE: TPM 324	CONTACT HOURS: 2-0-0
Goal: The course is designed to provide students with the knowledge and skills to enable them practice freight transport planning and management		

COURSE SPECIFICATIONS: THEORETICAL CONTENTS				PRACTICAL CONTENTS			
General Objective 1.0: Appreciate freight transport systems, freight planning, freight management and vehicle maintenance.							
Week	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation	
1.	1.1 Explain freight transport systems; 1.2 Explain freight planning, 1.3 Explain freight management. 1.4 Explain vehicle maintenance policies	Explain freight transport systems; Explain freight planning, Explain freight management. Explain vehicle maintenance policies	Books Journals Magazines			Discuss the freight transport systems	
General Objective 2.0: Apply logistics management in freight planning							
2	2.1 Define freight planning 2.2 Explain Freight Logistics management 2.3 Apply the policies of freight transport and logistics management.	Explain freight planning Explain freight logistics management apply the policies of freight transport and logistics management.	Books Journals Magazines CILT/CIoTA Bulletin			Discuss the concepts of Freight Logistics management	
General Objective 3.0: Apply intelligent transport system (ITS) to facilitate freight transport							
3	3.1 Explain intelligent transport system (ITS) 3.2 Describe the use of intelligent transport system in freight transport 3.3 Expalin the application of ITS in freight logistics management	Explain Intelligent Transport System (ITS) Explain the use of Intelligent Transport System in freight transport Expalin the application of ITS in Freight	Books Journals			Discuss the application of ITS in Freight Logistics Management	

		Logistics Management				
General Objective 4.0: Comprehend urban freight transport and city logistics						
4	<p>4.1 Explain urban freight transport</p> <p>4.2 Explain the concepts of city logistics.</p> <p>4.3 Explain the relationship between urban freight transport and city logistics practices</p>	<p>Explain urban freight transport</p> <p>explain the concepts of city logistics.</p> <p>Explain the relationship between urban freight transport and city logistics practices</p>	<p>Books</p> <p>Journals</p> <p>Magazines</p> <p>Engineering Manuals</p> <p>CILT/CIoTA Bulletin</p>			Discuss the relationship between urban freight transport and city logistics practices
General Objective 5.0: Recognize the roles of seaports, airports and free trade zones						
5	<p>5.1 Explain the roles of seaports and airports in freight transport</p> <p>5.2 Explain the roles of free trade zones in freight transport</p> <p>5.3 Explain the roles of collection and sorting units in freight transport,</p> <p>5.4 Explain the roles of Consolidation and Distribution Units in Freights Operations.</p>	<p>Explain the roles of: seaports, airports, free trade zones, collection and sorting units in freight transport</p> <p>Explain the roles of consolidation and distribution units in freights operations.</p>	<p>Books</p> <p>Journals</p> <p>Magazines</p> <p>CILT/CIoTA Bulletin</p>			Discuss the roles of collection and sorting units in freight transport,

General Objective 6.0: Explore the factors influencing freight distribution and flow.						
6	6.1 Explain freight distribution and flow 6.2 Explain the factors for efficient freight distribution and flow 6.3 Explain modal choice and network distribution for freight transport	Explain freight distribution and flow Explain the factors for efficient freight distribution and flow, Explain modal choice and network distribution for freight transport	Books Journals Magazines CILT/CIoTA Bulletin			Discuss the factors for efficient freight distribution and flow

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: FLEET OPERATIONS AND MANAGEMENT	Code: TPM 325	Credit Hour: 2 Credit Unit: 2
	Pre-requisite:	Theoretical: 2 hours/week
Year:1 Semester: 2		Practical: 0 hours/week
Goal: This course is designed to provide students with adequate knowledge and skills for effective fleet operations and management		
General Objectives:		
<p>On completion of this course, the student should be able to:</p> <ol style="list-style-type: none"> 1.0 Comprehend fleet operation, drivers and vehicle management 2.0 Appreciate fleet loading system and load security 3.0 Analyse fleet accident prevention methods, safety and security measures 4.0 Explore vehicle selection, vehicle acquisition and financing 5.0 Appreciate driving skills education and training 6.0 Analyse fleet maintenance cost, budgeting and insurance 7.0 Comprehend storage/warehouse system and fuel purchase, monitoring and consumption control 		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT							
COURSE TITLE: FLEET OPERATIONS AND MANAGEMENT			COURSE CODE: TPM 325		CONTACT HOURS: 2-0-0		
Goal: This course is designed to provide students with adequate knowledge and skills for effective fleet operations and management							
COURSE SPECIFICATIONS: THEORETICAL CONTENTS				PRACTICAL CONTENTS			
General Objective 1.0: Comprehend fleet operation, drivers and vehicle management							
Week	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation	
1.	1.1 Explain fleet operation 1.2 Explain driver management 1.3 Explain the elements of vehicle management	Explain fleet operation Explain driver management Explain vehicle utilization, routing and scheduling systems.	Books Journals Magazines CILT/CIoTA Bulletin Sample logbook			Discuss the elements of vehicle management	
General Objective 2.0: Appreciate loading system and load security in fleet operation							
2	2.1 Explain loading system 2.2 Explain load security 2.3 Explain the types of loading system 2.4 Apply load security measures.	Explain loading system Explain load security Explain the types of loading system Apply load security measures.	Books Journals			Discuss the types of Loading System and Load Security Measures.	
General Objective 3.0: Analyse fleet accident prevention methods, safety and security measures							
3	3.1 Define fleet accident, safety and security 3.2 Analyze the accident prevention methods 3.3 Explain fleet safety procedures	Explain fleet accident, safety and security Analyze the accident prevention methods, explain fleet safety procedures	Books Journals			Discuss fleet accident, safety and security	

	3.4 Describe fleet security measures.	Describe fleet security measures.				
General Objective 4.0: Explore vehicle selection, vehicle acquisition and financing						
4	4.1 Explain the principles of vehicle selection 4.2 Appreciate the methods of vehicle acquisition 4.3 Explain the sources and requirements of vehicle financing	Explain the principles of vehicle selection Appreciate the methods of vehicle acquisition Explain the sources and requirements of vehicle financing	Books Journals			Discuss the sources and requirements of vehicle financing
General Objective 5.0: Appreciate driving skill education and training						
5	5.1 Explain driving skills education 5.2 Explain driving skill training 5.3 Explain the requirements and importance of driving skills	Explain driving skill education Explain driving skill training Explain the requirements and importance of driving skills	Books Journals			Discuss the requirements and importance of driving skills
General Objective 6.0: Analyze fleet maintenance cost, budgeting and insurance						
6	6.1 Explain fleet maintenance cost 6.2 Appreciate fleet budgeting 6.3 Explain fleet insurance liabilities.	Explain fleet maintenance cost Appreciate fleet budgeting Explain fleet insurance liabilities.	Books Journals Magazines			Discuss fleet maintenance cost and budgeting
General Objective 7.0: Comprehend storage/warehouse system and fuel purchase, monitoring and consumption control						

7	<p>7.1 Explain the components of a warehouse System.</p> <p>7.2 Describe the procedures for fuel purchase/procurement</p> <p>7.3 Explain fuel monitoring and consumption control.</p>	<p>Explain the components of a warehouse system.</p> <p>Describe the procedures for fuel purchase/procurement</p> <p>Explain fuel monitoring and consumption control.</p>	Books Journals			Discuss fuel Monitoring and Consumption Control.
---	---	---	-------------------	--	--	--

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: TRANSPORT FOR SPECIALIZED NEEDS	Code: TPM 326	Credit Hour: 2 Credit Unit:2
	Pre-requisite:	Theoretical: 2 hours/week
Year:1 Semester: 2		Practical: 0 hours/week
Goal: This course is designed to provide students with the knowledge and skills required for planning the transport systems for specialized needs		
General Objectives:		
<p>On completion of this course, the student should be able to:</p> <ol style="list-style-type: none"> 1.0 Explore the forms of disability and their special mobility needs 2.0 Comprehend the peculiar mobility challenges of the disadvantaged and vulnerable group 3.0 Explore the relationship between disability and transport 4.0 Analyze the various design of transport vehicles for special people 5.0 Establish the role of government, private agencies and non-governmental organization in transport for the disabled or special people 6.0 Appreciate the responsibility of transport stakeholders to people with special needs 		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT							
COURSE TITLE: TRANSPORT FOR SPECIALIZED NEEDS			COURSE CODE: TPM 326		CONTACT HOURS: 2-0-0		
Goal: This course is designed to provide students with the knowledge and skills required for planning the transport systems for specialized needs							
COURSE SPECIFICATIONS: THEORETICAL CONTENTS				PRACTICAL CONTENTS			
General Objective 1.0: Explore the forms of disability and their special mobility needs							
Week	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation	
1.	1.1 Define disability 1.2 Explain disability mobility 1.3 Explain the forms of Disability 1.4 Analyze the special mobility needs.	Explain disability Explain disability mobility Explain the forms of Disability Analyze the special mobility needs.	Books Journals			Discuss disability and disability mobility	
General Objective 2.0: Comprehend the peculiar mobility challenges of the disadvantaged and vulnerable group							
2	2.1 Explain disadvantaged group 2.2 Explain Vulnerable group 2.3 Recognize the peculiar mobility challenges of the vulnerable and disadvantaged group.	Explain disadvantaged group Explain vulnerable group and the peculiar mobility challenges	Books Journals Magazines			Discuss the mobility challenges of the vulnerable and disadvantaged group	
General Objective 3.0: Explore the Relationship between Disability and Transport							
3	3.1 Explain transport disability 3.2 Explain the factors for	Explain transport disability Explain the factors for	Books Journals			Discuss the factors for the choice of	

	the choice of transport for disabled persons 3.3 Analyze the relationship between disability and Transport.	the choice of transport for disabled persons Analyze the relationship between disability and Transport.				transport for disabled persons
General Objective 4.0: Analyze the various design of transport vehicles for special people						
4	4.1 Explain transport vehicle for special needs 4.2 Explain the various design of transport vehicles for special people 4.3 Trace the design process for special need vehicles	Explain transport vehicle for special need Explain the various design of transport vehicles for special people Trace the design process for special need vehicles	Books Journals			Discuss the designs of transport vehicles for special people
General Objective 5.0: Establish the roles of government, private agencies and non-governmental organizations in transport for the disabled or special people						
5	5.1 Explain the roles of government in transport for the disabled or special people. 5.2 Explain the roles of private agencies in transport for the disabled or special people. 5.3 Explain the roles of Non-Governmental	Explain the roles of Government in Transport for the Disabled or Special People. Explain the roles of Private Agencies in Transport for the Disabled or Special People. Explain the roles of Non-Governmental	Books Journals Magazines CILT/CIoTA Bulletin			Discuss the roles of Government in Transport for the Disabled or Special People.

	Organizations in Transport for the Disabled or Special People.	Organizations in Transport for the Disabled or Special People.				
--	--	--	--	--	--	--

General Objective 6.0: Appreciate the responsibility of transport stakeholders to people with special needs						
6	6.1 Explain the responsibilities of drivers for people with special needs	Explain the responsibilities of drivers for people with special needs	Books			Discuss the duties of safety and traffic officers for people with special needs
	6.2 Explain the duties of safety and traffic officers for people with special needs	Explain the duties of Safety and traffic officers for people with special needs	Journals			
	6.3 Apply the transport policies and laws on people with special needs.	apply the transport policies and laws or people with special needs.	Magazines			
	6.4 Apply the safety measures of transport for special people while on transit.	Explore the safety measures of transport for special people while on transit.	CILT/CIoTA Bulletin			

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: RESEARCH METHODS IN TRANSPORT PLANNING AND MANAGEMENT	Code: TPM 327	Credit Hour: 2 Credit Unit:2
	Pre-requisite:	Theoretical:2 hours/week
Year:1 Semester: 2		Practical: 0 hours/week
Goal: This course is designed to provide students with knowledge and techniques to conduct research in transport planning and management		
General Objectives:		
<p>On completion of this course, the student should be able to:</p> <ol style="list-style-type: none"> 1.0 Appreciate the purpose and importance of research in transport planning and management 2.0 Recognize the types, characteristics of research designs and processes 3.0 Apply the relationship between research methods, data and research problems 4.0 Comprehend the characteristics of research techniques, sampling methods, procedure, and sample size. 5.0 Appraise the procedure for writing research proposal and report 6.0 Apply hypotheses, concepts, theory and models in transport research 		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT							
COURSE TITLE: RESEARCH METHODS IN TRANSPORT PLANNING AND MANAGEMENT			COURSE CODE: TPM 327		CONTACT HOURS: 2-0-0		
Goal: This course is designed to provide students with knowledge and techniques to conduct research in transport planning and management							
COURSE SPECIFICATIONS: THEORETICAL CONTENTS				PRACTICAL CONTENTS			
General Objective 1.0: Appreciate the purpose and importance of research in transport planning and management							
Week	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation	
1.	1.1 Explain the purpose of research in transport 1.2 Explain the importance of Research Methods in Transport Planning and Management. 1.3 Explain the need for research in transport planning	Explain the purpose of research in transport Explain the importance of Research Methods in Transport Planning and Management. Explain the need for research in transport planning	Books Journals			Discuss the importance of Research Methods in Transport Planning and Management	
General Objective 2.0: Explore the types and characteristics of research philosophy, designs and processes							
2	2.1 Explain the characteristics of research philosophy 2.2 Explain the types of transport research designs 2.3 Explain the process of a transport research	Explain the characteristics of Research Philosophy Explain the types of transport research Designs Explain the Process of a transport research	Books Journals Magazines CILT/CIoTA Bulletin			Discuss the Process of a transport research design	

	design.	design.				
--	---------	---------	--	--	--	--

General Objective 3.0: Apply the relationship between research methods, data and research problems						
3	3.1 Explain transport research methods, 3.2 Explain the nature transport research data 3.3 Formulate transport research problems.	Explain transport Research Methods, Explain the nature transport research data Formulate transport research problems.	Books Journals			Discuss transport Research Methods and Formulate transport research problems.
General Objective 4.0: Comprehend the characteristics of research techniques, sampling methods, procedure, and sample size.						
4	4.1 Explain the types of Research Techniques in transport 4.2 Explain Sampling Methods used in transport research, 4.3 Apply the Procedures for selection of Sample Size in a transport research. 4.4 Explain the advantages and disadvantages of transport research.	Explain the types of Research Techniques in transport Explain Sampling Methods used in transport research, Apply the Procedure for selection of Sample Size in a transport research. Explain the advantages and disadvantages of Transport Research.	Books Journals			Discuss the types of Research Techniques in transport and Sampling Methods used in transport research,
General Objective 5.0: Appraise the procedure for writing research proposal and report						
5	5.1 Explain proposal in transport research 5.2 Explain the contents of a transport research report 5.3 Analyze the	Explain Research Proposal in transport research and Explain the contents of a transport research Report	Books Journals			Discuss Proposal and report writing in transport research

	procedures for writing research proposal and Project Report	Analyze the procedures for Writing Research Proposal and Project Report				
General Objective 6.0: Apply hypotheses, concepts, theory and models in transport research						
6	6.1 Formulate hypotheses in transport research 6.2 Explain the relevance of Concepts and theory in transport research, 6.3 Explain the importance of models in transport research	Formulate hypothesis in transport research Explain the relevance of Concepts and theory in transport research, Explain the importance of models in transport research	Books Journals			Discuss the process of formulating hypotheses in transport research

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: TRANSPORT POLICY AND ADMINISTRATION	Code: TPM 328	Credit Hour: 2 Credit Unit:2
	Pre-requisite:	Theoretical: 2 hours/week
Year:1 Semester: 2		Practical 0 : hours/week
Goal: The course is designed to provide the students with knowledge and skills in transport policy and administration		
General Objectives:		
<p>On completion of this course, the student should be able to:</p> <ol style="list-style-type: none"> 1.0 Comprehend transport policy and administration issues 2.0 Appraise the roles of stakeholders in transport policy process 3.0 Apply social, political, environment and technical issues in transport policy. 4.0 Explore transport policy formulation, implementation and evaluation strategies 5.0 Partake in transport policy administration for national planning 		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT							
COURSE TITLE: TRANSPORT POLICY AND ADMINISTRATION			COURSE CODE: TPM 328		CONTACT HOURS: 2-0-0		
Goal: The course is designed to provide the students with knowledge and skills in transport policy and administration							
COURSE SPECIFICATIONS: THEORETICAL CONTENTS				PRACTICAL CONTENTS			
1.0 Specific Learning Objective 1.0: Comprehend transport policy and administration issues							
Week	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation	
1.	1.1 Define transport policy 1.2 Explain transport administration 1.3 Explain the Characteristics of a transport policy 1.4 Appraise the importance of Transport policy and administration.	Explain transport policy Explain transport administration Explain the Characteristics of a transport policy Appraise the importance of Transport policy and administration.	Books Journals Magazines CILT/CIoTA Bulletin			Discuss the importance of Transport policy and administration.	
1.0 General Objective 2.0: Appraise the roles of stakeholders in transport policy process							
2	2.1 Explain the stakeholders involve in making a transport policy 2.2 Describe the role of each stakeholder in making a transport policy 2.3 Explain the process of	Explain the stakeholders involve in making a transport policy Describe the role of each stakeholder in making a transport	Books Journals Magazines CILT/CIoTA Bulletin			Discuss the process of formulating a transport policy	

	formulating a transport policy	policy Explain the process of formulating a transport policy				
1.0 General Objective 3.0: Apply social, political, environment and technical issues in transport policy.						
3	3.1 Explain the Social issues contain in a transport policy 3.2 Explain the Political aspect of a transport policy, 3.3 Explain the Environmental issues of a transport policy 3.4 Explain the Technical aspects of a transport policy	Explain the Social issues contain in a transport policy Explain the Political aspect of a transport policy, Explain the Environmental issues of a transport policy Explain the Technical aspects of a transport policy	Books Journals			Discuss the Environmental and Technical issues of a transport policy
1.0 General Objective 4.0: Explore transport policy formulation, implementation and evaluation strategies						
4	4.1 Explain the steps in Transport Policy Formulation 4.2 Explain the stages of Transport Policy and implementation 4.3 Explain the techniques used in the evaluation of a transport policy	Explain the steps in Transport Policy Formulation Explain the stages of Transport Policy and implementation Explain the techniques used in the evaluation of a transport policy	Books Journals Magazines Manuals CILT/CIoTA Bulletin			Discuss the techniques used in the evaluation of a transport policy
1.0 General Objective 5.0: Partake in transport policy administration for national planning						

5	5.1 Explain transport administration 5.2 Explain the relationship between transport policy and national planning 5.3 Appreciate the Role of Transport policy in National Planning.	Explain transport administration Explain the relationship between transport policy and national planning Appreciate the Role of Transport policy in National Planning.	Books Journals CILT/CIoTA Magazines			Discuss the Role of Transport policy in National Planning.
---	--	--	--	--	--	--

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: AVIATION OPERATIONS AND MANAGEMENT	Code: TPM 329	Contact Hour: 2-0 Credit Unit:2.0
	Pre-requisite:	Theoretical: 2 hours/week
Year:1 Semester: 1		Practical: 0 hours/week
Goal: The course is designed to equip students with the required knowledge and skills in air transport operations and management		
General Objectives: On completion of this course, the student should be able to: 1.0 Comprehend the nature, classifications and importance of aviation operations, management and performance. 2.0 Explore the airline organization and airport operations in relation with the aviation law and procedures 3.0 Analyse the statutory roles of civil aviation industry and its impact on national growth 4.0 Explore the structure of International Civil Aviation Organization (ICAO) and its objectives		

5.0 Appraise the communication instructions in the aviation industry and the role of Fixed-Based Operation (FBO)

6.0 Apply the importance and procedure of safety measures in aviation operation and management

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT						
COURSE TITLE: AVIATION OPERATIONS AND MANAGEMENT			COURSE CODE: TPM 329		CONTACT HOURS: 2-0-0	
Goal: The course is designed to equip students with the required knowledge and skills in air transport operations and management						
COURSE SPECIFICATIONS: THEORETICAL CONTENTS				PRACTICAL CONTENTS		
General Objective 1.0: Comprehend the nature, classifications and importance of aviation operations and management						
Week	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
1.	1.1 Explain the nature of air transport services 1.2 Explain the classification of air transport services 1.3 Explain the importance of air transport services	Explain the nature of air transport services Explain the classification of air transport services Explain the importance of air transport services	Books, Journals, Magazines, CILT/CIoTA Bulletin, Websites, Research reports, Newspapers.			Discuss the importance of aviation services in national development
General Objective 2.0: Explore the airline organization and airport operations in relation with the aviation law and procedures						
2	2.1 Describe airline organization and its functions. 2.2 Appraise airport operational laws and policies 2.3 Analyse airline organisation performance.	Describe airline organization and its functions. Appraise airport operational laws and policies Analyse airline organisation performance	Books, Journals, Magazines, CILT/CIoTA Bulletin, Websites, Research reports, Newspapers			Describe airline organization and its roles in aviation industry.
General Objective 3.0: Analyse the statutory roles of civil aviation industry and its impact on national growth						

4	<p>3.1 Explain the establishment and functions of agencies in the aviation industry.</p> <p>3.2 Analyse the importance of the aviation agencies on nation's economy</p> <p>3.3 Appraise the performance of civil aviation industry in Nigeria.</p>	<p>Explain the establishment and functions of agencies in the aviation industry.</p> <p>Analyse the importance of the aviation agencies on nation's economy</p> <p>3.3 Appraise the performance of civil aviation industry in Nigeria</p>	<p>Books, Journals, Magazines, CILT/CIoTA Bulletin, Websites, Research reports, Newspapers</p>			<p>Discuss the importance of civil aviation industry in Nigeria</p>
<p>General Objective 4.0: Explore the structure of International Civil Aviation Organization (ICAO) and its objectives</p>						
5	<p>4.1 Explain the establishment and objectives of ICAO</p> <p>4.2 Analyse the organizational structure of the ICAO</p> <p>4.3 Appreciate the roles of ICAO in the aviation industry</p>	<p>Explain the establishment and objectives of ICAO</p> <p>Analyse the organizational structure of the ICAO</p> <p>Appreciate the roles of ICAO in the aviation industry</p>	<p>Books, Journals, Magazines, CILT/CIoTA Bulletin, Websites, Research reports, Newspapers</p>			<p>Appraise the roles of ICAO in aviation industry</p>

General Objective 5.0: Appraise the communication instructions in the aviation industry and the role of Fixed-Based Operation (FBO)						
6	5.1 Define communication in the aviation industry 5.2 Explain the need and style of communication in the aviation industry 5.3 Appraise the effectiveness of communication style in aviation industry. 5.4 Explain the concept of FBO operations 5.5 Explain the roles of Fixed-Based Operation (FBO).	Explain communication in the aviation industry Explain the need and style of communication in the aviation industry Appraise the effectiveness of communication style in aviation industry. Explain the concept of FBO operations Explain the roles of Fixed-Based Operation (FBO).	Books, Journals, Magazines, CILT/CIoTA Bulletin, Websites, Research reports, Newspapers			Discuss the style and the need of communication instructions in aviation industry.
General Objective 6.0: Apply the importance and procedure of safety measures in aviation operation and management						
9	6.1 Explain the need for aviation safety measures. 6.2 Explain the procedures of safety measures in aviation industry. 6.3 Appraise the performance of safety measures in aviation	6.4 Explain the need for aviation safety measures. 6.5 Explain the procedures of safety measures in aviation industry. Appraise the performance of safety measures in aviation				Discuss the performance of safety measures in aviation industry in Nigeria.

	industry.	industry.				
--	-----------	-----------	--	--	--	--

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: TRANSPORT PLANNING DESIGN VI (AIRPORT FACILITY DESIGN)	Code: TPM 330	Credit Hour: 5 Credit Unit: 3
	Pre-requisite:	Theoretical: 1 hours/week
Year:1 Semester: 1		Practical 4 : hours/week
Goal: The course is designed to equip students with knowledge and skills to plan, design and inspect airport facilities		
General Objectives: On completion of this course, students should be able to: 1.0 Comprehend airport facilities 2.0 Assess the factors in the planning and design of airport facility components 3.0 Apply safety regulation within the airport facility 4.0 Describe the inspection of facilities in a seaports 5.0 Prepare plan and technical report for airport facility		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT						
COURSE TITLE: TRANSPORT PLANNING DESIGN VI (AIRPORT FACILITY DESIGN)			COURSE CODE: TPM 330		CONTACT HOURS: 5	
GOAL: The course is designed to equip students with knowledge and skills to plan, design and inspect airport facilities						
COURSE SPECIFICATION:		THEORETICAL CONTENTS		PRACTICAL CONTENTS		
General objective 1.0 Comprehend airport facilities						
WK	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
1-2	1.1 Define airport 1.2 Explain the concept of airport facility and its components. 1.3 Explain the features of airport facilities. 1.4 Explain the types and functions of airport facilities. 1.5 Apply spatial planning requirements for airport facility planning and design.	1.6 Explain airport 1.7 Explain the concept of airport facility and its components. 1.8 Explain the features of airport facilities. 1.9 Explain the types and functions of airport facilities. 1.10 Apply spatial planning requirements for airport facility planning and design.	Relevant textbooks, Maps, Research report, and Computer Units.			Discuss the concept of airport facility.
General Objective 2.0: Assess the factors in the planning and design of airport facility components						
	2.1 Explain the components for designing airport facilities. 2.2 Explain the scope, principles and techniques for	Explain the components for designing airport facilities. Explain the scope, principles and techniques	Relevant textbooks, Maps, Research report, and	Demonstrate the uses of the components and techniques for designing airport facilities.	Guide students to: Use the components and techniques for	Discuss the factors that influence airport facility design.

	<p>designing airport facilities.</p> <p>2.3 Explain the factors that influence airport facility design.</p> <p>2.4 Apply spatial planning requirements and standards for airport facility design.</p>	<p>for designing airport facility.</p> <p>Explain the factors that influence airport facility design</p> <p>Apply spatial planning requirements and standards for airport facility design.</p>	<p>Computer Units.</p>	<p>Illustrate the components of a airport.</p> <p>Design and interpret the layout for a airport</p>	<p>designing airport facilities.</p> <p>Illustrate the components of a airport.</p> <p>Design and interpret the layout for a airport</p>	
6.0 General Objective 3.0: Apply safety regulation within the airport facility						
	<p>1.1 Define Personal Protective Equipment (PPEs).</p> <p>1.2 Apply safety regulation on airport facilities</p> <p>1.3 Explain types of disaster that affect airport facilities</p>	<p>Apply safety regulation on airport facilities</p> <p>Explain types of disaster that affect airport facilities</p>	<p>Books, Journals, Magazines, CILT/CIoTA Bulletin, and research reports</p>	<p>Demonstrate the usage of Personal Protective Equipment (PPEs) within the airport facility</p>	<p>Guide students to use the PPEs within airport facility</p>	<p>Discuss safety regulation and rules in airport facility</p>
General Objective 4.0: Describe the inspection of facilities in a airport						
	<p>4.1 Explain Inspection of a facility</p> <p>4.2 Explain the methods of inspecting an airport facility</p> <p>4.3 Explain the concept of inspecting an airport facility</p>	<p>Explain Inspection of a facility</p> <p>Explain the methods of inspecting a airport facility</p> <p>Explain the concept of inspecting an airport facility</p>	<p>Books Journals Manuals Base Maps Drawing Materials Cameras GPS etc.</p>	<p>Carry out the process of inspecting a airport facility</p>	<p>Guide students through the process of inspecting an airport facility</p>	<p>Discuss the methods and process of inspecting an airport facility.</p>
General Objective 5.0: Prepare plan and technical report for airport facility						

	<p>5.1 Explain a plan and technical report of a airport facility</p> <p>5.2 Explain how to write a plan report</p> <p>5.3 Explain how to write a technical report on a airport facility</p>	<p>Explain a plan and technical report of a airport facility</p> <p>Explain how to write a plan report</p> <p>Explain how to write a technical report on a airport facility</p>	<p>Books</p> <p>Journals</p> <p>Magazines</p> <p>Manuals</p> <p>CILT/CIoTA</p> <p>Bulletin</p> <p>Drone,</p> <p>Base Maps,</p> <p>GPS,</p> <p>GIS,</p> <p>TransCAD,</p> <p>Cameras</p> <p>Manuals</p>	<p>5.1 Prepare a plan and technical report of a airport facility</p>	<p>Guide students to Prepare a plan and technical report of a airport facility</p>	<p>Discuss a technical report of a airport facility</p>
--	---	---	---	--	--	---

YEAR 2 SEMESTER 1

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: PROJET PLANNING AND EVALUATION	Code: TPM 411	Contact Hour: 2
		Credit Unit:2
	Pre-requisite:	Theoretical: 2 hours/week
Year:1 Semester: 1		Practical: 0 hours/week
Goal: The course is designed to provide students with the comprehensive knowledge and skills to effectively plan and manage transport project		
General Objectives:		
On completion of this course, the student should be able to:		

- 1.0 Appreciate the fundamentals of transport project planning and management
- 2.0 Comprehend the nature of transport project task in planning and management
- 3.0 Analyse the nature of transport project cost estimation
- 4.0 Comprehend the techniques for transport project planning and management
- 5.0 Appraise risk in transport project management

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT						
COURSE TITLE: PROJET PLANNING AND EVALUATION				COURSE CODE: TPM 411	CONTACT HOURS: 2-0-0	
GOAL: : The course is designed to provide students with the comprehensive knowledge and skills to effectively plan and manage transport project						
COURSE SPECIFICATION:		THEORETICAL CONTENTS	PRACTICAL CONTENTS			
General objective 1.0: Appreciate the fundamentals of transport project planning and management						
WK	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
1-4	1.1 Explain different types of transport projects. 1.2 Appraise transport project life-cycle 1.3 Analyse factors affecting transport project success and failure in Nigeria. 1.4 Explain the objectives of transport project Management and its performance .	i. Explain different types of transport projects. ii. Appraise transport project life-cycle iii. Analyse factors affecting transport project success and failure in Nigeria. iv. Explain the objectives of transport project management and its performance	Books, Journals, Magazines, CILT/CIoTA Bulletin, Websites, Research reports, Newspapers, Policy documents, drones, GPS, Manuals, maps, GIS, Camera			Discuss the different types of transport projects.
General Objective 2.0: Comprehend the nature of transport project task in planning and management						
5-6	2.1 Analyse the nature of transport projects.	1 Analyse the nature of transport projects.	Books, Journals, Magazines,			Discuss the nature and

	<p>2.2 Explain the characteristics of transport project organizations</p> <p>2.3 Explain the management principles of a transport project</p>	<p>2.2 Explain the characteristics of transport project organizations</p> <p>2.3 Explain the management principles of a transport project</p>	<p>CILT/CIoTA Bulletin, Websites, Research reports, Newspapers, Policy documents, drones, GPS, Manuals, maps, GIS, Camera</p>			<p>characteristics of transport projects.</p>
<p>General Objective 3.0: Analyse the nature of transport project cost estimation</p>						
	<p>3.1 Explain cost elements in transport project and management.</p> <p>3.2 Analyse the need for cost estimation in transport projects</p> <p>3.3 Explain cost-estimation profile in transport project.</p>	<p>i. Explain cost elements in transport project and management.</p> <p>ii. Analyse the need for cost estimation in transport projects</p> <p>iii. Explain cost estimation profile in transport project.</p>	<p>Books, Journals, Magazines, CILT/CIoTA Bulletin, Websites, Research reports, Newspapers, Policy documents, drones, GPS, Manuals, maps, GIS,</p>			<p>Explain the need for cost-estimation in transport projects</p>

			Camera			
General Objective 4.0: Comprehend the techniques for transport project planning and management						
10-12	4.1 Define transport project planning techniques 4.2 Explain the techniques for planning and managing transport projects 4.3 Appraise the techniques for evaluating transport projects.	Define transport project planning techniques 4.2 Explain the techniques for planning and managing transport projects 4.3 Appraise the techniques for evaluating transport projects.	Books, Journals, Magazines, CILT/CIoTA Bulletin, Websites, Research reports, Newspapers, Policy documents, drones, GPS, Manuals, maps, GIS, Camera			Discuss the techniques for project evaluation.
General Objective 5.0: Appraise risk in transport project management						
13-14	5.1 Explain risk and techniques for risk identification in transport project 5.2 Analyse the nature and characteristics of risks in transport project. 5.3 Explain various types of risks in transport project.	i. Explain risk and techniques for risk identification in transport project ii. Analyse the nature and characteristics of risks in transport project. iii. Explain various types of risks in transport project.	Books, Journals, Magazines, CILT/CIoTA Bulletin, Websites, Research reports, Newspapers, Policy			Discuss types of risks in transport project.

			documents, drones, GPS, Manuals, maps, GIS, Camera			
--	--	--	---	--	--	--

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: TRANSPORT AND TOURISM	Code: TPM 412	Contact Hour: 2 Credit Unit:2
	Pre-requisite:	Theoretical: 2 hours/week
Year:1 Semester: 1		Practical: 0 hours/week
Goal: The course is designed to equip students with the knowledge and skills in transport and tourism		
General Objectives:		
<p>On completion of this course, the student should be able to:</p> <p>1.0: Comprehend the nature and characteristics of transport and tourism</p> <p>2.0: Appreciate the organization and control of tourist transport</p> <p>3.0: Analyse the characteristics and methods of tourist traffic projections</p> <p>4.0: Appreciate the techniques of tourist traffic routing and scheduling</p> <p>5.0 Comprehend the roles and responsibilities of the stakeholders in tourist transport management</p> <p>6.0 Analyse the nature and importance of tourism documents in tourist transport planning and management</p>		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT						
COURSE TITLE: TRANSPORT AND TOURISM				COURSE CODE: TPM 412	CONTACT HOURS: 2-0	
GOAL: The course is designed to equip students with the knowledge and skills in transport and tourism						
COURSE SPECIFICATION:		THEORETICAL CONTENTS		PRACTICAL CONTENTS		
General objective 1.0: Comprehend the nature and characteristics of transport and tourism						
WK	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
1	1.1 Define transport and tourism 1.2 Explain the nature and characteristics of transport in tourism 1.3 Explain factors influencing modal choice in tourism transport.	Explain transport and tourism Explain the nature and characteristics of transport in tourism ii. Explain factors influencing modal choice in tourism transport.	Books, Journals, Magazines, CILT/CIoT A Bulletin, Websites, Research reports, Newspapers, Policy documents, drones, GPS, Manuals, maps, GIS, Camera			Discuss the importance of transport in tourism.
General Objective 2.0: Appreciate the organization and control of tourist transport						
2-3	2.1 Explain the nature and characteristics of tourism transport organizations. 2.2 Analyse the management structure	Explain the nature and characteristics of tourism transport organizations. 2.2 Analyse the management	Books, Journals, Magazines, CILT/CIoT A Bulletin, Websites, Research reports,			Discuss the need for management control in tourism transport organization.

	and techniques in tourism transport. 2.3 Appraise the need for management control in tourism transport organization.	structure and techniques in tourism transport. 2.3 Appraise the need for management control in tourism transport organization.	Newspapers, Policy documents, drones, GPS, Manuals, maps, GIS, Camera			
General Objective 3.0: Analyse the characteristics and methods of tourist traffic projections						
6-7	3.1 Define tourist traffic projection 3.2 Explain traffic generation, distribution and projection in tourism industry 3.3 Analyse the techniques for tourism traffic estimates in transport management	.i. Explain traffic generation, distribution and projection in tourism industry ii. Analyse the techniques for tourism traffic estimates in transport management	Books, Journals, Magazines, CILT/CIoTA Bulletin, Websites, Research reports, Newspapers, Policy documents, drones, GPS, Manuals, maps, GIS, Camera			Discuss the techniques for tourism traffic estimates in transport management
General Objective 4.0: Appreciate the techniques of tourist traffic routing and scheduling						
8-9	4.1 Explain traffic routing and scheduling 4.2 Explain the method of traffic routing and scheduling.	Explain traffic routing and scheduling Explain the method of traffic routing and	Books, Journals, Magazines, CILT/CIoTA Bulletin, Websites,			Discuss the method of traffic routing and scheduling.

	<p>4.3 List factors that influence tourist traffic routes and scheduling</p> <p>4.4 Appraise the importance of traffic routing and scheduling in tourism industry.</p> <p>4.5 Analyse the constraints and solutions to tourism traffic routing and scheduling</p>	<p>scheduling.</p> <p>List factors that influence tourist traffic routes and scheduling</p> <p>4.4 Appraise the importance of traffic routing and scheduling in tourism industry.</p> <p>4.5 Analyse the constraints and solutions to tourism traffic routing and scheduling</p>	<p>Research reports, Newspapers, Policy documents, drones, GPS, Manuals, maps, GIS, Camera</p>			
General Objective 5.0: Comprehend the roles and responsibilities of the stakeholders in tourist transport management						
10-11	<p>5.1 Explain the nature and characteristics of stakeholders in tourism transport business</p> <p>5.2 Analyse the relevance of stakeholders in tourism transport business.</p> <p>5.3 Appraise the types and performance of stakeholders in tourism</p>	<p>Explain the nature and characteristics of stakeholders in tourism transport business</p> <p>Analyse the relevance of stakeholders in tourism transport business.</p> <p>iii. Appraise the</p>	<p>Books, Journals, Magazines, CILT/CIoT A Bulletin, Websites, Research reports, Newspapers, Policy documents, drones, GPS, Manuals, maps, GIS, Camera</p>			<p>Discuss the types and performance of stakeholders in tourism transport business</p>

	transport business	types and performance of stakeholders in tourism transport business				
General objective 6.0: Analyse the nature and importance of tourism documents in tourist transport planning and management						
12-14	6.1 Explain the nature and characteristics of documents in tourism transport industry 6.2 Explain the relationship between tourism documents and transport documents 6.3 Explain the concept of tourism documentation and validation in relation to tourism transport planning.	i. Explain the nature and characteristics of documents in tourism transport industry Explain the relationship between tourism documents and transport documents Explain the concept of tourism documentation and validation in relation to tourism transport planning.	Books, Journals, Magazines, CILT/CIoT A Bulletin, Websites, Research reports, Newspapers, Policy documents, drones, GPS, Manuals, maps, GIS, Camera			Explain the relationship between tourism documents and transport documents

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: LAND USE PLANNING AND ANALYSIS	Code: TPM 413	Credit Hour: 2 Credit Unit:2
	Pre-requisite:	Theoretical2 hours/week
Year:1 Semester: 1		Practical 0 : hours/week
Goal: The course is designed to provide students with the knowledge and skills to participate in land use planning and spatial data analysis		
<p>General Objectives:</p> <p>On completion of this course, the student should be able to;</p> <ol style="list-style-type: none"> 1.0 Apply land use on traffic and transport planning 2.0 Appreciate the types and classification of Land Uses in rural and urban settlements 3.0 Apply land use on trip generation, and distribution 4.0 Discuss land use Design Standards 5.0 Comprehend the procedure for preparing land use plan 6.0 Conduct Trip generation analysis by different land use 		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT						
COURSE TITLE: LAND USE PLANNING AND SPATIAL ANALYSIS			COURSE CODE: TPM 413		CONTACT HOURS: 2-2-0	
GOAL: The course is designed to provide students with the knowledge and skills to participate in land use planning and spatial data analysis						
COURSE SPECIFICATION:		THEORETICAL CONTENTS		PRACTICAL CONTENTS		
1.0 General objective 1.0: Apply land use on traffic and transport planning						
WK	Specific Learning Objective	Teacher's Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
1-2	1.1 Define land use 1.2 Explain land use planning 1.3 Explain the rationale behind land uses and land use planning 1.4 Appraise the scope of land use planning	Explain land use Explain land use planning Explain the rationale behind land uses and land use planning Appraise the scope of land use planning	Textbooks and journals on Land uses			Discuss the rationale behind land uses and land use planning
1.0 General Objective 2.0: Appreciate the types and classification of Land Uses in rural and urban settlements						
3-4	2.1 Explain the types of land uses 2.2 Appreciate the classification of land uses 2.3 Explain the methods of land use classification	Explain the types of land uses Appreciate the classification of land uses Explain the	Textbooks, charts, journals etc.			Explain the methods and importance of land use classification

	2.4 Explain the importance of land use classification	methods of land use classification Explain the importance of land use classification				
1.0 General Objective 3.0: Apply land use on trip generation and distribution						
5-6	3.1 Define trip generation, attraction and distribution. 3.2 Explain the effects of land uses on trips generation, attraction and distribution 3.3 Explain how trips concept can be used to shape land use	Explain trip generation, attraction and distribution. Explain the effects of land uses on trips generation, attraction and distribution Explain how trips concept can be used to shape land use	Textbooks, charts, journals etc.			Discuss the effects of land uses on trips generation, attraction and distribution
1.0 General Objective 4.0: Discuss land use Design Standards						
7-8	4.1 Define design standard 4.2 Explain the relevance	Explain design standard	Textbooks, charts, pictures,			Discuss the application of

	<p>of design standards in land use planning</p> <p>4.3 Appreciate the application of design standards in land use planning</p> <p>4.4 Explain design standards of community facilities urban circulation systems and industrial/commercial development areas.</p>	<p>Explain the relevance of design standards in land use planning</p> <p>Appreciate the application of design standards in land use planning</p> <p>Explain design standards of community facilities urban circulation systems and industrial/commercial development areas.</p>	<p>videos, journals etc.</p>			<p>design standards in land use planning</p>
1.0 General Objective 5.0: comprehend the procedure for preparing land use plan						
9-10	<p>5.1 Define planning procedure</p> <p>5.2 Explain the different</p>	<p>Define planning procedure</p> <p>Explain the</p>	<p>Textbooks, charts, pictures,</p>			<p>Discuss the procedures of</p>

	types of plans 5.3 Outline the procedures of preparing land use plan.	different types of plans Outline the procedures of preparing land use plan	videos, journals, Urban Design standard with colour codes etc.			preparing land use plan.
General Objective 6.0: Conduct Trip generation for data analysis for different land use						
11-12	6.1 Define data, data gathering, data analysis and data interpretation 6.2 Explain the sources of trip generation data 6.3 Explain the methods of analyzing trip data 6.4 Appreciate the uses of trip data and information	Explain data, data gathering, data analysis and data interpretation Explain the sources of trip generation data Explain the methods of analyzing trip data Appreciate the uses of trip data and information	Textbooks, charts, pictures, videos, journals etc.			Discuss data, data gathering, data analysis and data interpretation

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: TRANSPORT SEMINAR	Code: TPM 414	Credit Hour: 2 Credit Unit:2
	Pre-requisite:	Theoretical: 2 hours/week
Year:1 Semester: 1		Practical 0 : hours/week
Goal: The course is intended to enable students prepare and deliver seminar on planning issues, problems and solutions		
General Objectives: On completion of this course, students should be able to; 1.0 Understand the purpose of transport seminar 2.0 Frame suitable and researchable seminar topic 3.0 Prepare and present seminar on solving transport problems.		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT						
COURSE TITLE: TRANSPORT SEMINAR				COURSE CODE: TPM 414	CONTACT HOURS: 2-2-0	
GOAL: The course is intended to Enable students to prepare and deliver seminar on planning issues, problems and solutions						
COURSE SPECIFICATION:		THEORETICAL CONTENTS			PRACTICAL CONTENTS	
General objective 1.0: Understand the purpose of transport seminar						
WK	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
1-2	1.0 Purpose of Seminar 1.1 Explain what is meant by seminar. 1.2 Discuss the need for seminar in urban planning programme	(i). Explain what a seminar is and its purpose in planning	Past seminar papers, relevant textbooks on various seminar topics.			
General Objective 2.0: Frame suitable and present seminar topic						
3-4	2.1 Identify contemporary planning issues. 2.2 Choose topics that will address a particular planning issue.	(i) Identify and frame seminar topics to reflect current planning issues and problems.	Books on Seminar Writing.			
General Objective 3.0 Prepare and present seminar on solving transport problems.						
5-6	3.1 State how to collect and use data. 3.2 Arrange the ideas in	(i) Collection and use of data for seminar papers.	Books on Seminar Writing			

7-12	<p>a table of contents.</p> <p>3.3 Write out the paper in a logical sequence with simple expressions.</p> <p>3.4 Present the seminar paper to an audience.</p> <p>3.5 Incorporate comments from the audience.</p>	<p>(ii) Approval of planning seminar topics for students.</p> <p>(iii) Presentation of seminar papers by students to audience.</p> <p>(iv) Review and incorporation of comments into the seminar topics.</p>	<p>Bus, camera, writing materials, computer, maps etc.</p>			
------	---	--	--	--	--	--

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: TRANSPORT MANAGEMENT INFORMATION SYSTEM	Code: TPM 415	Credit Hour: 2 Credit Unit: 2
	Pre-requisite:	Theoretical: 2 hours/week
Year:1 Semester: 1		Practical 0 : hours/week
Goal: The course is designed to provide students with the knowledge and skills of software applications in transport planning and management		
General Objectives:		
<p>On completion of this course, students should be able to:</p> <ol style="list-style-type: none"> 1.0 Appreciate the importance of Transport Management Information System (TMIS) in transport operations 2.0 Comprehend the nature of spatial object and data management in transport operations 3.0 Comprehend the components of transport database 4.0 Apply the automated information systems in managing transport operations 5.0 Apply Transport Management System (TMS) in transport operations 6.0 Apply the principles of Geographic Information System (GIS) in transport planning and management 		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT						
COURSE TITLE: TRANSPORT MANAGEMENT INFORMATION SYSTEM				COURSE CODE: TPM 415	CONTACT HOURS: 2	
GOAL: The course is designed to provide students with the knowledge and skills of software applications in transport planning and management						
COURSE SPECIFICATION:		THEORETICAL CONTENTS		PRACTICAL CONTENTS		
General objective 1.0: Appreciate the importance of Transport Management Information System (TMIS) in transport operations						
WK	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
1-2	1.4 Define Information System 1.5 Trace historical development of Transport Management System (TMS) 1.6 Relate Information System to transport planning and management 1.7 Describe types and features of TMIS in transport operations 2.0 Explain the roles of TMIS in transport	Explain Information Management System Relate Information System to transport planning and management Describe types and features of TMIS in transport operations Explain the roles of TMIS in transport operation	Books, Journals, Magazines, Bulletins, and Research Reports			Discuss Management Information System TMIS in transport operations

	operation					
General Objective 2.0: Comprehend the nature of spatial object and data management in transport operations						
3-4	<p>2.1 Define spatial objects and data management</p> <p>2.2 Explain types of spatial objects and data in transport operations.</p> <p>2.3 Describe the acquisition of spatial objects and data in transport operations.</p> <p>2.4 Explain data management and its characteristics in transport operations.</p> <p>2.5 Explain the significance and constraints of data management in transport operations.</p>	<p>Explain spatial objects and data management</p> <p>Explain types of spatial objects and data in transport operations.</p> <p>Describe the acquisition of spatial objects and data in transport operations.</p> <p>Explain data management and its characteristics in transport operations.</p> <p>Explain the significance and constraints of data management in transport operations.</p>	Textbooks, Database, computer unit, relevant software packages.			Appraise the relevance of data management in transport operations.
General Objective 3.0: Comprehend the components of transport database						
5-6	<p>3.1 Explain the components of a database.</p> <p>3.2 Describe the functions of transport database</p>	<p>Discuss the components of a database.</p>	Textbooks, Database, computer unit,			Discuss the relationship among the components of a

	components. 3.3 Explain the relationship among the components of a transport database.	Describe the functions of transport database components. Discuss the relationship among the components of a transport database	relevant software packages.			transport database.
General Objective 4.0: Apply the automated information systems in managing transport operations						
7-8	4.1 Explain the automated information systems in transport operations. 4.2 Explain the features of the automated information systems in transport operations. 4.3 Describe the benefits of the automated information systems in transport operations.	Explain the automated information systems in transport operations. Explain the features of the automated information systems in transport operations. Describe the benefits of the automated information systems in transport operations.	Textbooks, Database, computer unit, relevant software packages.			Discuss the features of any three automated information systems in managing transport operations.
General Objectives 5.0: Apply Transport Management System (TMS) in transport operations						
10-11	5.1 Explain the concepts, features and principles of TMS. 5.2 Describe the relationship among the	Discuss historical development of Transport Management System (TMS) Discuss the	Computer hardware and software packages, GPS, ordinance maps, database, textbooks, journals and research			Explain the features and principles of TMS in transport operations.

	<p>concepts of TMS.</p> <p>5.3 Explain the application of TMS in transport operations.</p>	<p>concepts, features and principles of TMS.</p> <p>Explain the relationship among the concepts of TMS.</p> <p>Discuss the application of TMS in transport operations.</p>	<p>reports.</p>			
1.0 General Objective 6.0: Apply the principles of Geographic Information System (GIS) in transport planning and management						
12-14	<p>6.1 Trace the historical development of Geographic Information System (GIS)</p> <p>6.2 Explain the concepts, features, principles and data models of GIS.</p> <p>6.3 Describe types of data, data layer and data integration in GIS.</p>	<p>Discuss the historical development of Geographic Information System (GIS)</p> <p>Discuss the concepts, features, principles and data models of GIS.</p> <p>Describe types of</p>	<p>Computer hardware and software packages, GPS, ordinance maps, database, textbooks, journals and research reports.</p>			<p>With a relevant example, discuss the application of GIS in transport management.</p>

	<p>6.4 Describe the relationship among the concepts and data types in GIS.</p> <p>6.5 Explain the application of GIS in transport planning and management.</p>	<p>data, data layer and data integration in GIS.</p> <p>Discuss the relationship among the concepts and data types in GIS.</p> <p>Discuss the application of GIS in transport planning and management</p>				
--	--	---	--	--	--	--

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: TRAFFIC MANAGEMENT AND SAFETY	Code: TPM 416	Credit Hour: 2 Credit Unit: 2
	Pre-requisite:	Theoretical: 2 hours/week
Year:2 Semester: 1		Practical: 0 hours/week
Goal: The course is designed to provide the students with the knowledge and skills to manage traffic and safety issues in transport		
General Objectives:		
<p>On completion of this course, the student should be able to</p> <ol style="list-style-type: none"> 1.0 Comprehend traffic management strategies and techniques 2.0 Appreciate the responsibilities of Parent, Teachers and Passengers in road safety 3.0 Appreciate traffic offence, penalties and accident statistics 4.0 Appraise the causes, effects and countermeasures of road crashes 5.0 Comprehend legislation, Enforcement and enforcement agencies 6.0 Apply Defensive Driving principles and practices 7.0 Explore accidents investigation and reporting procedure 		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT						
COURSE TITLE:–TRAFFIC MANAGEMENT AND SAFETY				COURSE CODE: TPM 416	CONTACT HOURS: 2-0-0	
GOAL: The course is designed to provide the students with the knowledge and skills to manage traffic and safety issues in transport						
COURSE SPECIFICATION:		THEORETICAL CONTENTS		PRACTICAL CONTENTS		
8.0 General objective 1.0: Comprehend traffic management strategies and techniques						
WK	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
1-2	1,1 Explain Traffic management 1.2 Comprehend road traffic management principles 1.3 Explain the techniques of traffic management	Explain Traffic management Comprehend road traffic management principles Explain the techniques of traffic management	Computer hardware and software packages, GPS, ordinance maps, textbooks, journals.			Discuss road traffic management principles
9.0 General Objective 2.0: Appreciate the responsibilities of Parent, Teachers and Passengers in road safety						
3-4	2.1 Explain road safety 2.1 Describe the roles and responsibilities of parents in road safety,	Explain road safety Describe the roles and	Journals, handbook/fliers by traffic management			Discuss the roles and responsibilities of

	<p>2.3 Explain the roles and responsibilities of teachers in road safety</p> <p>2.4 Explain the roles and responsibilities of passengers in ensuring road safety.</p>	<p>responsibilities of parents in road safety,</p> <p>Explain the roles and responsibilities of teachers in road safety</p> <p>Explain the roles and responsibilities of passengers in ensuring road safety.</p>	<p>agencies, traffic laws and regulations etc.</p>			<p>passengers in ensuring road safety.</p>
10.0 General Objective 3.0: Appreciate traffic offence, penalties and accident statistics						
5-6	<p>3.1 Explain traffic offences</p> <p>3.2 Describe offenses committed by road users</p> <p>3.3 Explain the penalties of traffic offences in traffic laws.</p> <p>3.4 Explain accident and the causes of accident</p> <p>3.6 Explain the methods of</p>	<p>Explain traffic offences</p> <p>Describe offenses committed by road users</p> <p>Explain the penalties of traffic offences in traffic laws.</p>	<p>Report from traffic management agencies,</p> <p>report from road safety agencies,</p> <p>Journals/Text books/handb</p>			<p>Discuss the methods of gathering and analyzing data relating to traffic offences and accident data</p>

	gathering and analyzing data relating to traffic offences and accident data	Explain accident and the causes of accident Explain the methods of gathering and analyzing data relating to traffic offences and accident data	ook on traffic management, computer, calculator, etc.			
11.0	General Objective 4.0: Appraise the causes, effects and countermeasures of road crashes					
7-8	4.1 Define road crashes 4.2 Explain the cause of road crashes 4.3 Explain the effect of road crashes 4.4 Apply measures to counter accident	Define road crashes Explain the cause of road crashes Explain the effect of road crashes Apply measures to counter accident	Textbooks, Journals, charts, pictures, computer/internet, etc.			Discuss the effect of road crashes and measures to counter accident
12.0	General Objective 5.0: Comprehend legislation, Enforcement and enforcement agencies					
9-10	5.1 Define Legislation in traffic management 5.2 Explain the importance	Explain Legislation in traffic	Textbooks, Journals, computer/inte			Discuss the responsibilities of

	<p>of legislation in traffic management</p> <p>5.3 Explain the reasons and processes of legislation for traffic regulations</p> <p>5.4 Appreciate the responsibilities of traffic enforcement agencies in Nigeria</p>	<p>management</p> <p>Explain the importance of legislation in traffic management</p> <p>Explain the reasons and processes of legislation for traffic regulations</p> <p>Appreciate the responsibilities of traffic enforcement agencies in Nigeria</p>	<p>rnet, chart etc.</p>			<p>traffice nforce ment agencies in Nigeria</p>
13.0 General Objective 6.0: Apply Defensive Driving principles and practices						
11-12	<p>6.1 Explain Defensive driving</p> <p>6.2 Explain the Principles and practices of defensive driving</p> <p>6.3 Appreciate defensive</p>	<p>Explain Defensive driving</p> <p>Explain the Principles and practices of</p>	<p>Textbooks, Journals, computer/inte rnet, chart etc.</p>			<p>Discuss the Principles and practices of defensive driving</p>

	driving and accident prevention 6.4 Explain the importance defensive driving	defensive driving Appreciate defensive driving and accident prevention Explain the importance defensive driving				
14.0 General Objective 7.0 Explore accidents investigation and reporting procedure						
13	7.1 Explain accident investigation 7.2 Explain the procedure for investigating and analyzing accident 7.3 Appraise the procedures for reporting accident	Explain accident investigation Explain the procedure for investigating and analyzing accident Appraise the procedures for reporting accident	Textbooks, Journals, computer/internet, chart etc.			Discuss accident investigation and procedures for reporting accident

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: FUNDAMENTALS OF OPERATIONS RESEARCH	Code: TPM 417	Credit Hour: 2 Credit Unit:2
	Pre-requisite:	Theoretical: 2 hours/week
Year:2 Semester: 1		Practical 0 : hours/week
Goal: This course is designed to provide students with knowledge and skills required to solve complex analytical situation		
General Objectives:		
On completion of this course, the student should be able to;		
1.0 Appreciate the basic concept of Operations Research		
2.0 Comprehend Network Problems and Applications		
3.0 Apply index numbers		
4.0 Appreciate the operating characteristics of a Queuing System		
5.0 Comprehend the project scheduling and PERT-CPM		
6.0 Apply mathematical formulations in Operations Research		
7.0 Appreciate Linear Programming		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT						
COURSE TITLE: FUNDAMENTALS OF OPERATIONS RESEARCH			COURSE CODE: TPM 417	CONTACT HOURS: 2-0-0		
GOAL	This course is designed to provide students with knowledge and skills required to solve complex analytical situation					
COURSE SPECIFICATION:		THEORETICAL CONTENTS		PRACTICAL CONTENTS		
1.0 General objective 1.0 Appreciate the basic concept of Operations Research						
WEEK	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Learning Resources
1	1.5 Define operation research 1.6 Trace the origins and impacts of operations research 1.7 Explain the scope, features, phases and types of operations research Models. 1.8 Explain operations research Methods and tools 1.9 Explain the limitations of operations research 1.10 Calculate mathematical modeling of real life problems.	i. Explain operation research ii. Discuss the origins and impacts of operations research iii. Explain the scope, features, phases and types of operations research Models. iv. Explain operations research Methods and tools v. Explain the limitations of operations research vi. Show the mathematical modeling of real life problems	Books Journals Magazines CILT Transport Focus Bulletin			Discuss the scope, features, phases and types of operations research Models.

	General Objective 2.0: Comprehend Network Problems and Applications					
2.3	<p>2.8 Explain initial basic feasible solutions</p> <p>2.9 Explain optimum solution for non- degeneracy and degeneracy model;</p> <p>2.10 Explain travelling salesmen problem.</p> <p>2.11 Transportation and Assignment Problem Formulation</p>	<p>i. Explain initial Basic Feasible solutions</p> <p>ii. Explain optimum solution for non- degeneracy and degeneracy model;</p> <p>iii. Discuss travelling salesmen problem.</p> <p>iv. Discuss Transportation and Assignment Problem Formulation e.g. Shortest Path Problem, Minimum Spanning Tree Problem etc.</p>	<p>Books</p> <p>Journals</p> <p>Magazines</p> <p>CILT</p> <p>Transport</p> <p>Focus</p> <p>Bulletin</p>			Discuss the initial basic feasible solutions
	General Objective 3.0: Apply index numbers					
5-6	<p>3.7 Define index number</p> <p>3.8 Explain the concept of index numbers</p> <p>3.9 Explain Simple and Weighted Index numbers</p> <p>3.10 Highlight published Economic and business</p>	<p>i. Explain the concept of index numbers</p> <p>ii. Explain Simple and Weighted Index numbers</p> <p>iii. Apply published Economic and business index numbers to real</p>	<p>Books</p> <p>Journals</p> <p>Magazines</p> <p>CILT</p> <p>Transport</p> <p>Focus</p> <p>Bulletin</p>			Discuss the concept of index numbers

	index numbers.	life situation				
	General Objective 4.0: Appreciate the Operating Characteristics of a Queuing System					
7-8	4.7 Define Queuing theory 4.8 Explain the constituents of a Queuing System, Service facility and Queue discipline 4.9 Show Practical problems in Queuing system	i. Explain Queuing theory ii. Explain the constituents of a Queuing System, Service facility and Queue discipline iii. Discuss Practical problems in Queuing system	Books Journals Magazines CILT Transport Focus Bulletin			Explain Queuing theory

General Objective 5.0: Comprehend Project Scheduling and PERT-CPM						
9-10	<p>5.5 Define project scheduling</p> <p>5.6 Differentiate between Programme Evaluation and Review Technique (PERT) and Critical Path Method (CPM)</p> <p>5.7 Explain PERT/CPM Network Components and Precedence Relationship,</p> <p>5.8 Explain Project Management with respect to Practical problems in Networking Methods.</p>	<p>i. Explain project scheduling</p> <p>ii. Explain the Difference between Programme Evaluation and Review Technique (PERT) and Critical Path Method (CPM)</p> <p>iii. Explain PERT/CPM Network Components and Precedence Relationship,</p> <p>iv. Explain Project Management with respect to Practical problems in Networking Methods</p>	<p>Books</p> <p>Journals</p> <p>Magazines</p> <p>CILT</p> <p>Transport Focus Bulletin</p>			<p>Discuss Programme Evaluation and Review Technique (PERT) and Critical Path Method (CPM)</p>
General Objective 6.0: Apply mathematical formulations in Operations Research						

11-12	6.5 Define operation research 6.6 Explain Mathematical models and models components 6.7 Explain simplex solution Technique using Graphical Method, Algebraic Approach	i. Explain operation research ii. Explain Mathematical models and models components iii. Explain simplex solution Technique using Graphical Method, Algebraic Approach	Books Journals Magazines CILT Transport Focus Bulletin	Guide students to formulate mathematical formulations	Demonstration mathematical formulations	Discuss Mathematical models and models components
Objective 7.0 : Appreciate Linear programming						
	7.1 Define linear programming 7.2 Explain Linear algebra 7.3 Explain the Linear independence and dependence of vectors. 7.4 Explain the Concept of Basis, Basic Feasible solution, Convex sets. 7.5 Explain the Formulation of Linear Programming Problem	i. Explain linear programming ii. Explain Linear algebra iii. Explain the Linear independence and dependence of vectors. iv. Explain the Concept of Basis, Basic Feasible solution, Convex sets. v. Explain the Formulation of Linear Programming		Guide students to solve linear programming problems	Solve linear programming problems	Discuss the Concept of Basis, Basic Feasible solution, Convex sets.

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: PIPELINE TRANSPORT OPERATIONS AND MANAGEMENT	Code: TPM 418	Credit Hour: 2 Credit Unit: 2
	Pre-requisite:	Theoretical: 2 hours/week
Year:1 Semester: 1		Practical 0 : hours/week
Goal: The course is designed to equip students with the knowledge and skills of pipeline operations and management		
General Objectives:		
On completion of this course, the student should be able to:		
1.0 Appreciate the importance of pipeline operations to national economic development		
2.0 Comprehend the nature of pipeline operations in Nigeria		
3.0 Recognize the functions of the organizations responsible for pipeline management in Nigeria		
4.0 Apply the policy and regulations guiding tank farm and depot development		
5.0 Describe pipeline vandalism and its implications for the national economy		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT						
COURSE TITLE: PIPELINE TRANSPORT OPERATIONS AND MANAGEMENT				COURSE CODE: TPM 418	CONTACT HOURS: 2-0-2	
GOAL: The course is designed to equip students with the knowledge and skills of pipeline operations and management						
COURSE SPECIFICATION:		THEORETICAL CONTENTS		PRACTICAL CONTENTS		
General objective 1.0: Appreciate the importance of pipeline operations to national economic development						
WK	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
1-3	1.1 Explain pipeline transport system. 1.2 Explain the components and purpose of pipeline transport system. 1.3 Appraise the nature and context of pipeline transport operations. 1.4 Explain the concept of safe operation and its application in pipeline transport operations. 1.5 Explain the codes and standards in planning pipeline transport. 1.6 Explain the economic importance of pipeline	Discuss the pipeline transport system. Explain the components and purpose of pipeline transport system Discuss the nature and context of pipeline transport operations. Discuss the concept of safe operation and its application in pipeline transport operations. Discuss the codes and	Textbooks, Journals, Research reports, Monograph, and Gazette.			Explain the significance of pipeline transport operations to national economic development.

	transport operations to national development.	standards in planning pipeline transport. Discuss the economic importance of pipeline transport operations to national development.				
General Objective 2.0: Comprehend the nature of pipeline operations in Nigeria						
4-5	2.1 Explain the nature and context of pipeline transport operations in Nigeria 2.2 Trace the evolution of pipeline transport operations in Nigeria 2.3 Explain the constraints of pipeline transport operations in Nigeria	Discuss the nature and context of pipeline transport operations in Nigeria. Discuss the evolution of pipeline transport operations in Nigeria. Discuss the constraints of pipeline transport operations in Nigeria.	Textbooks, Journals, Research reports, Monograph, and Gazette.			Discuss the constraints of pipeline transport operations in Nigeria.
General Objective 3.0: Recognize the functions of the organizations responsible for pipeline management in Nigeria						
6-7	3.1 Explain pipeline management 3.2 Explain the features and	Discuss pipeline management Explain the features and	Textbooks, Journals, Research			Explain the roles of the organizations

	<p>purpose of pipeline management</p> <p>3.3 Explain the strategies for managing pipeline transport operations.</p> <p>3.4 Assess the roles of organizations responsible for pipeline management in Nigeria.</p>	<p>purpose of pipeline management</p> <p>Discuss the strategies for managing pipeline transport operations.</p> <p>Discuss the roles of organizations responsible for pipeline management in Nigeria.</p>	<p>reports, Monograph, Website and Gazette.</p>			<p>responsible for pipeline management in Nigeria.</p>
<p>General Objective 4.0: Apply the policy and regulations guiding tank farm and depot development</p>						
8-9	<p>4.1 Explain policy and regulation.</p> <p>4.2 Explain different pipeline policy and regulations guiding depot development and tank farm.</p> <p>4.3 Explain the importance of pipeline policy and regulations in depot development.</p> <p>4.4 Explain the implications of transport policy on the pipeline transport development and its operations.</p>	<p>Explain policy and regulation, different pipeline policy and regulations guiding depot development and tank farm.</p>	<p>Textbooks, Journals, computer/internet, chart, maps, pictures etc.</p>			<p>Explain the implications of transport policy on the development of pipeline transport development and its operations. .</p>

General Objective 5.0: Describe pipeline vandalism and its implications for the national economy						
11-12	<p>5.1 Explain pipeline vandalism.</p> <p>5.2 Explain the forms of vandalism in the pipeline transport system.</p> <p>5.3 Appraise the causes and consequences of pipeline vandalism.</p> <p>5.4 Describe the mitigation measures for pipeline vandalism in Nigeria.</p>	<p>Discuss pipeline vandalism.</p> <p>Discuss the forms of vandalism in the pipeline transport system.</p> <p>Discuss the causes and consequences of pipeline vandalism.</p> <p>Describe the mitigation measures for pipeline vandalism in Nigeria.</p>	<p>Relevant reports, journals, textbooks, newspaper/magazines, pictures, statistical data and monograph.</p>			<p>Assess the effects of pipeline vandalism on national economic development.</p>

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: TRANSPORT PLANNING DESIGN VII (PIPELINE TERMINAL FACILITY DESIGN)	Code: TPM 419	Credit Hour: 5 Credit Unit:3
	Pre-requisite:	Theoretical:1 hours/week
Year:1 Semester: 1		Practical 4: hours/week
Goal: The course is designed to equip students with the knowledge and skills to plan, design and inspect pipeline terminal facility		
General Objectives:		
On completion of this course, the student should be able to:		
7.0 Comprehend pipeline transport terminal facilities		
8.0 Appraise planning and design factors for components of pipeline terminal facilities		
9.0 Apply safety regulation and rules on facilities within the pipeline terminal		
10.0 Describe the inspection of pipeline depot, tank farm, booster stations, refineries and other ancillary facilities		
11.0 Prepare plan and technical report for pipeline transport terminal facility		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT						
COURSE TITLE: TRANSPORT PLANNING DESIGN VII (PIPELINE TERMINAL FACILITY DESIGN)			COURSE CODE: TPM 419		CONTACT HOURS: 5	
GOAL: The course is designed to equip students with basic knowledge of pipeline terminal facility design						
COURSE SPECIFICATION:		THEORETICAL CONTENTS		PRACTICAL CONTENTS		
General objective 1.0: Comprehend pipeline transport terminal facilities						
WK	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
1-2	<p>1.1 Explain the characteristics of pipeline terminal facilities.</p> <p>1.2 Explain the types and functions of pipeline terminal facilities.</p> <p>1.3 Explain the concept of pipeline terminal facility and its components.</p> <p>1.4 Apply spatial planning requirements for pipeline terminal facility planning and design.</p>	<p>Explain the characteristics of pipeline terminal facilities.</p> <p>Explain the types and functions of pipeline terminal facilities.</p> <p>Explain the concept of pipeline terminal facility and its components.</p> <p>Apply spatial planning requirements for pipeline terminal facility planning and design.</p>	<p>Relevant textbooks, Maps, Research report, and Computer Units.</p>			<p>Discuss the concept of pipeline terminal facility.</p>
General Objective 2.0: Appraise planning and design factors for components of pipeline terminal facilities						
	<p>2.1 Explain the components for designing pipeline terminal facilities.</p>	<p>Explain the components for designing pipeline terminal facilities.</p>	<p>Relevant textbooks, Maps,</p>	<p>Demonstrate the usage of the components and techniques for</p>	<p>Guide students to: use the</p>	<p>Discuss the factors that influence</p>

	<p>2.2 Explain the scope, principles and techniques for designing pipeline terminal facilities.</p> <p>2.3 Explain the factors that influence pipeline terminal facility design.</p> <p>2.4 Apply spatial planning requirements and standards for pipeline terminal facility design.</p>	<p>Explain the scope, principles and techniques for designing pipeline terminal facility.</p> <p>Explain the factors that influence pipeline terminal facility design</p> <p>Apply spatial planning requirements and standards for pipeline terminal facility design.</p>	<p>Research report, and Computer Units.</p>	<p>designing pipeline terminal facilities.</p> <p>Illustrate the components of a pipeline transport terminal</p> <p>Prepare plan design and interpret layout, master plan, and maps for a pipeline terminal.</p>	<p>components and techniques for designing pipeline terminal facilities.</p> <p>illustrate the components of a pipeline transport terminal</p> <p>prepare plan design and interpret layout, master plan, and maps for a pipeline terminal.</p>	<p>pipeline terminal facility design.</p>
<p>General Objective 3.0: Apply safety regulation and rules on facilities within the pipeline terminal</p>						
	<p>3.1 Define Personal Protective equipment (PPEs)</p> <p>3.2 Describe the application of PPEs</p> <p>3.3 Assess the use of safety regulation on pipeline</p>	<p>Explain the application of safety regulation on pipeline terminal facilities</p> <p>Discuss types of disaster that affect pipeline terminal facilities</p>	<p>Books, Journals, Magazines, CILT/CIoTA Bulletin, and research</p>	<p>Demonstrate the use of Personal Protective Equipment (PPEs) within the pipeline transport terminal facility</p>	<p>Guide students to use the PPEs within the pipeline transport terminal facility</p>	<p>Discuss safety regulation and rules in pipeline terminal facility</p>

	terminal facilities 3.4 Explain types of disaster that affect pipeline terminal facilities		reports			
General Objective 4.0 Describe the inspection of pipeline depot, tank farm, booster stations, refineries and other ancillary facilities						
	4.1 Explain the methods and process of inspecting: - pipeline depot, - tank farm, - booster stations, - refineries and other - ancillary terminal facilities.	Explain the methods and process of inspecting pipeline depot, tank farm, booster stations, refineries and other ancillary terminal facilities.	Books Journals Manuals Base Maps Drawing Materials Cameras GPS etc.	Carry out inspection of: -pipeline depot, -tank farm, -booster stations - ancillary facilities - refinery	Guide students through: the process of inspecting pipeline depot, tank farm, booster stations and ancillary facilities. the process of inspecting a refinery.	Explain the methods and process of inspecting a pipeline terminal facility.
General Objective 5.0: Prepare plan and technical report for pipeline transport terminal facility						
	5.4 Explain the pipeline plan 5.5 Identify other basic terminal components in the design of pipeline plan. 5.6 Explain layout design, maps and master plan for pipeline terminal. 5.7 Produce a technical report	Explain the pipeline plan and other basic terminal components design Explain layout design, maps and master plan for pipeline terminal. Write a technical report	Books Journals Magazines Manuals CILT/CIoTA Bulletin Drone, Base Maps, GPS, GIS, TransCAD, Cameras	Prepare pipeline plan and other basic terminal components design. Interpret layout, master plan, and maps for a rail terminal. Prepare a technical report	Guide students to: prepare a pipeline plan and interpret layout, master plan, and maps for a pipeline terminal write a technical report on pipeline	Explain pipeline plan and other basic terminal components in the design of pipeline

			Manuals		terminal facility	
--	--	--	---------	--	-------------------	--

YEAR 2 SEMESTER 2

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: FREIGHT CLEARING AND FORWARDING	Code: TPM 421	Credit Hour: 2 Credit Unit:2
	Pre-requisite:	Theoretical: 2 hours/week
Year:1 Semester: 1		Practical 0: hours/week
Goal: The course is designed to enable students develop competencies needed to become freight forwarding professionals		
General Objectives:		
On completion of this course, students should be able to:		
1.0 Comprehend the principles of freight clearing and forwarding		
2.0 Recognize the basics of export and import trade and documentations		
3.0 Appreciate the importance of ocean shipping and logistics management		
4.0 Comprehend basics of seaport management		
5.0 Analyze the significance of multimodal transport in freight clearing and forwarding		
6.0 Familiarize with basic legal framework of Nigerian Customs Service		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT						
COURSE TITLE FREIGHT CLEARING AND FORWARDING			COURSE CODE: TPM 421		CONTACT HOURS: 2-1-0	
GOAL: The course is designed to enable students develop competencies needed to become freight forwarding professionals						
COURSE SPECIFICATION:		THEORETICAL CONTENTS		PRACTICAL CONTENTS		
General objective 1.0: Comprehend the principles of freight clearing and forwarding						
WEEK	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
1-2	1.1 Explain freight, freight clearing and freight forwarding 1.2 Explain nature, types and characteristics of freight 1.3 Explain the principles and procedures for freight clearing and forwarding. 1.4 Explain the international rules and standards of freight clearing and forwarding. 1.5 Assess the institutional frameworks for freight clearing and forwarding in Nigeria.	Discuss freight, freight clearing and freight forwarding. Discuss the nature, types and characteristics of freight. Discuss the principles and procedures for freight clearing and forwarding. Discuss the international rules and standards on freight clearing and forwarding. Explain the institutional frameworks for freight clearing and forwarding in	Books Journals Magazines CILT Transport Focus Bulletin			Explain the documentation process in freight clearing and forwarding. Discuss the significance of freight clearing and forwarding in the development of the Nigeria's maritime transport.

	1.6 Explain the constraints of freight clearing and forwarding in Nigeria.	Nigeria. Discuss the constraints of freight clearing and forwarding in Nigeria				
General Objective 2.0: Recognize the basics of export and import trade and documentations						
3-4	2.1 Explain the import and export trade 2.2 Explain the preliminary considerations and procedures in export and import trade. 2.3 Explain the export and import controls and licenses. 2.4 Explain export and import sales, packaging and finance. 2.5 Explain shipment preparation process and documentation	Discuss the import and export trade Discuss the preliminary considerations and procedures in export and import trade. Explain the export and import controls and licenses. Discuss export and import sales, packaging and finance. Explain the shipment preparation process and documentation.	Books, Journals, Magazines, CILT Transport Focus, Monograph, and Seaport Bulletins			Discuss the shipment preparation process and documentation.
General Objective 3.0: Appreciate the importance of ocean shipping and logistics management						
5-6	3.1 Define ocean shipping, logistics and logistics	Define ocean shipping, logistics and logistics	Books, Journals,			Discuss the roles of logistics

	<p>management</p> <p>3.2 Explain types and components of ocean shipping</p> <p>3.3 Explain types and uses of ship and procedures of ship registration.</p> <p>3.4 Explain the logistics process in ocean shipping</p> <p>3.5 Describe the actors in ocean shipping</p> <p>3.6 Explain forms of logistics management in ocean shipping</p> <p>3.7 Explain the roles of logistics management in ocean shipping</p>	<p>management.</p> <p>Explain types and components of ocean shipping.</p> <p>Explain types and uses of ship and procedures of ship registration.</p> <p>Explain the logistics process in ocean shipping.</p> <p>Describe the actors in ocean shipping.</p> <p>Explain forms of logistics management in ocean shipping.</p> <p>Explain the roles of logistics management in ocean shipping.</p>	<p>Magazines, CILT Transport Focus, Monograph, and Seaport Bulletins</p>			<p>management in ocean shipping.</p>
General Objective 4.0: Comprehend basics of seaport management						
7-8	<p>4.1 Define seaport and seaport management</p> <p>4.2 Explain the activities,</p>	<p>Explain seaport and seaport management</p>	<p>Books, Journals, Magazines,</p>			<p>Outline the functions of a seaport.</p>

	functions and structure of a seaport 4.3 Explain port management and administration	Explain the activities, functions and structure of a seaport Explain port management and administration	CILT Transport Focus, Monograph, and Seaport Bulletins			Discuss port management and administration in Nigeria
General Objective 5.0: Analyze the significance of multimodal transport in freight clearing and forwarding						
9-10	5.1 Define multimodal transport 5.2 Explain the multimodal transport operations in shipping industry 5.3 Explain the multimodal transport requirements for freight forwarding 5.4 Explain the constraints of multimodal transport operations in Nigeria's shipping industry.	Explain multimodal transport Discuss the multimodal transport operations in shipping industry Discuss the multimodal transport requirements for freight forwarding Discuss the constraints of multimodal transport operations in Nigeria's shipping industry.	Books, Journals, Magazines, CILT Transport Focus, Monograph, and Seaport Bulletins			Discuss the challenges of multimodal transport operations in Nigeria's shipping industry.
General Objective 6.0 : Familiarize with basic legal framework of Nigerian Customs Service						
11-12	6.1 Define legal framework 6.2 Trace the establishment of Nigerian Custom Service	Define legal framework Trace the establishment of	Books, Journals, Magazines,			Discuss the establishment of Nigerian Custom

	<p>6.3 Explain the Customs service regulation and policy in Nigeria</p> <p>6.4 Explain the administrative structure of Nigerian Custom Service.</p> <p>6.5 Explain the Nigerian Custom Service clearance procedure.</p>	<p>Nigerian Custom Service</p> <p>Discuss the Customs services, regulation and policy in Nigeria</p> <p>Discuss the administrative structure of Nigerian Custom Service.</p> <p>Explain the Nigerian Custom Service clearance procedure.</p>	<p>CILT Transport Focus, Monograph, and Seaport Bulletins</p>			<p>Service.</p>
--	---	--	---	--	--	-----------------

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: TRANSPORT TECHNOLOGY	Code: TPM 422	Credit Hour: 3 Credit Unit:2
	Pre-requisite:	Theoretical: 1 hours/week
Year:1 Semester: 1		Practical 2 : hours/week
Goal: The course is designed to provide students with knowledge and skills required in transport technologies.		
General Objectives:		
On completion of this course, students should be able to:		
<ul style="list-style-type: none"> 1.0 Appreciate automobile workshop equipment and machines. 2.0 Apply Critical Contemporary Issues (CCI) 3.0 Appreciate conceptual view of transport system 4.0 Appreciate ITS technologies in transport 5.0 Apply fundamentals traffic flow behavior and analysis 6.0 Appraise emerging technologies for automobile diagnosis and maintenance. 		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT						
COURSE TITLE: TRANSPORT TECHNOLOGY				COURSE CODE: TPM 422	CONTACT HOURS: 1-0-2	
GOAL: The course is designed to provide students with knowledge and skills required in transport technologies						
COURSE SPECIFICATION:		THEORETICAL CONTENTS		PRACTICAL CONTENTS		
General objective 1.0 Appreciate automobile workshop equipment and machines						
WEEK	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
1-2	1.1 Explain the basic equipment/machines used in transport/automobile workshop. 1.2 Explain the functions of machines/equipment in the workshop. 1.3 Explain the procedure involve in the use of equipment. 1.4 Explain how to the maintain equipment in the workshop.	i. Explain the basic equipment /machines used in automobile workshop. ii. Explain the functions of machines/ equipment in the workshop. iii. Explain the procedure involve in the use of equipment. iv. Explain how to the maintain equipment in the workshop.	Books Journals Magazines CILT Transport Focus Bulletin			Discuss the functions of machines/ equipment in the automobile workshop
1.0 General Objective 2.0: Apply Critical Contemporary Issues (CCI)						
3-4	2.1 Explain the critical issues affecting transport system 2.2 Describe Transport System Phases 2.3 Explain transport system	i. Explain critical issues affecting transport systems e.g. Mobility, Energy, Global Climate Change, Urban Form,	Books Journals Magazines CILT Transport			Differentiate between transport system phases and

	components	Population, Economic development/growth, Environmental issues ii. Explaining Transport System Phases e.g. Conceptualization, Planning, Construction, Operations/Maintenance and commissioning, Security. iii. Explain transport system components such as infrastructure, power system, control system fuel system and vehicle characteristics.	Focus Bulletin			transport system component.
1.0 General Objective 3.0: Appreciate conceptual view of transport system						
5-6	3.1 Define transport model. 3.2 Explain the attributes of transport models 3.3 Explain the types/categories of transport models 3.4 Describe the conceptual view of transport system 3.5 Explain the inter-relationship of transport	i. Explain transport model. ii. Describe the attributes of transport models e.g. complexity, accuracy, data requirements, computational requirements, estimation requirements etc. iii. Explain types of model e.g. descriptive simulation	Books Journals Magazines CILT Transport Focus Bulletin			Discuss transport model and its attributes in transport systems. Explain the inter-

	system	models; systems of linear or non-linear equations; cross-sectional time-series and Optimization-continuous or discrete variables; linear or non-linear functions iv. Explain the conceptual view of transport system analysis v. Explain inter-relationship of transport system e.g. Type I, Type II and Type III				relationship of transport system
General Objective 4.0 Appreciate ITS technologies in transport						
7-9	4.1 Define Intelligent Transportation System (ITS) 4.2 Outline components of ITS. 4.3 State the Fundamental ITS Insights 4.4 State principles of electronic tolls	i. Explain Intelligent Transportation System (ITS) ii. Discuss components of ITS. iii. State the Fundamental ITS Insight e.g. Technologies of communications, control, electronics and computer hardware and software; GPS etc. iv. Discuss various fluids	Books Journals Magazines			

		<p>Linkage of vehicle and transportation e.g. ATMS-Advanced Transportation Management System; ATIS-Advanced Traveler Information System, Vehicle-to-Vehicle Communication; Advanced Vehicle Control Systems (AVCS), Advanced Traveler Information Systems (ATIS) etc.</p> <p>v. Explain electronic toll collections and its fundamentals</p>				
General Objective 5.0: Apply fundamentals traffic flow behavior and analysis						
10-11	<p>5.1 Define traffic flow</p> <p>5.2 Explain traffic flow as its affects human behavior</p> <p>5.3 Explain the component of geometric design</p> <p>5.4 Explain the principles of pavement design and analysis</p> <p>5.5 Explain factors influencing traffic flow</p>	<p>i. Explain traffic flow</p> <p>ii. Explain traffic flow as its affects human behavior</p> <p>iii. Explain component of geometric design e.g. Cross-sectional features, horizontal alignment, vertical alignment and intersections.</p> <p>iv. Explain principles of pavement design and</p>	<p>Books</p> <p>Journals</p> <p>Magazines</p> <p>CILT</p> <p>Transport Focus</p> <p>Bulletin</p>			<p>Explain traffic flow and its effects on human behavior</p> <p>Outline factors influencing traffic flow</p>

		analysis e.g. structural design of roads, design of paving materials, determination of the layer thickness, and construction and maintenance procedures v. Explain factors influencing traffic flow				
General Objective 6.0: Appraise emerging technologies for automobile diagnosis and maintenance.						
12-14	6.1 Differentiate between diagnosis and maintenance. 6.2 Explain new technologies for vehicle diagnosis 6.2 Explain reasons for emerging technologies 6.3 Compare emerging and traditional technologies 6.4 Analysis report of automobile diagnosed problem	i. Explain emerging automobile diagnosis technologies. ii. Discuss the rationales for new technologies for diagnosis. iii. Explain types of diagnosing technologies iv. Analysis report of automobile diagnosed problem	Books Journals Magazines	Analysis report of automobile diagnosed problem Take students to workshop to Carryout independent vehicle maintenance	Guide students to diagnose and analyze an automobile problem Guide students to carry out maintenance on of a vehicle.	

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: TRANSPORT ECONOMICS	Code: TPM 423	Credit Hour: 2 Credit Unit:2
	Pre-requisite:	Theoretical:2 hours/week
Year:1 Semester: 1		Practical 0: hours/week
Goal: The course is designed to provide students with knowledge and skills required in transport economics		
General Objectives:		
On completion of this course, the student should be able to:		
<ul style="list-style-type: none"> 1.0 Appreciate the basic concept of transport economics 2.0 Appreciate international trade and transport 3.0 Appraise pricing and costing in transport services 4.0 Appreciate the role of transport in National economic development 5.0 Apply the concept of regulation and deregulation in transport. 6.0 Appreciate the investment opportunities in transport industry. 7.0 Apply management techniques in Transport Enterprise. 		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT						
COURSE TITLE: TRANSPORT ECONOMICS				COURSE CODE: TPM 423		CONTACT HOURS: 2
GOAL: The course is designed to provide students with knowledge and skills required in transport economics						
COURSE SPECIFICATION:		THEORETICAL CONTENTS			PRACTICAL CONTENTS	
1.0 General Objective 1.0. Appreciate the basic concept of transport economics						
WEEK	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
1-2	1.1 Define economics. 1.2 Distinguish between macro and microeconomics. 1.3 Explain transport economics 1.4 Explain the principles of market situation in transport economics 1.5 Explain the importance of transport economics.	i. Explain the terms economics. ii. Explain the difference between macro and micro economics. iii. Explain transport economics iv. Explain the principles of market situation in transport economics v. Explain the importance of transport economics.	Books, journals and other relevant materials			Discuss the importance of transport economics Explain transport economics

General Objective 2.0: Appreciate international trade and transport						
3	2.1 Define international trade 2.2 Explain the relationship between international trade and economic growth 2.3 Explain the theory of international trade 2.4 Explain the sources of Foreign Direct Investment 2.5 Explain the involvement of the state in the international trade flows	i. Explain international trade ii. Explain the relationship between international trade and economic growth iii. Explain the theory of international trade iv. Explain the sources of Foreign Direct Investment v. Explain the involvement of the state in the international trade flows	Books, Journals and other relevant materials			Discuss the relationship between international trade and economic growth Explain the theory of international trade
1.0	General Objective 3.0: Appraise pricing and costing in transport services					
4	3.1 Define transport services 3.2 Explain transport pricing and costing.	i. Explain transport services and its	Books, journals and other			Discuss the characteristics of supply

	<p>3.3 Explain the characteristics of supply and demand of transport services.</p> <p>3.4 Differentiate between transport costing and pricing.</p> <p>3.5 Explain external transport costs and their containment</p>	<p>types e.g. public and private ownership.</p> <p>ii. Explain transport pricing and costing.</p> <p>iii. Explain the characteristics of supply and demand of transport services</p> <p>iv. Differentiate between transport costing and pricing</p> <p>v. Explain external transport costs and their containment</p>	relevant materials			<p>and demand of transport services.</p> <p>Differentiate between transport costing and pricing.</p>
General Objective 4.0: Appreciate the role of transport in economic development.						
5-6	<p>4.1 Define economic development</p> <p>4.2 Explain the theory of economic growth</p> <p>4.3 Explain the indices for measuring economic</p>	<p>i. Explain economic development</p> <p>ii. Discuss the theory of economic</p>	Books, Journals and other learning materials.			Discuss the influence of transport on human resources

	<p>development</p> <p>4.4 Explain the roles of transport in economic development.</p> <p>4.5 Explain the influence of transport on human resources</p> <p>4.6 Generate demand and supply for passenger and freight transport.</p>	<p>growth e.g. Sources of Long-Run Growth, The Solow Growth Model etc.</p> <p>iii. Explain the indices for measuring economic development e.g. HDI (Human Development Index), GDI(Gender Development Index), HPI (Human Poverty Index) etc. but per capita)</p> <p>iv. Explain the roles of transport in economic development e.g. GNP (Gross National Product) etc.</p> <p>v. Describe the</p>				
--	---	---	--	--	--	--

		influence of transport on human resources vi. Explain demand and supply for passenger and freight transport.				
General Objective 5.0: Apply the concept of regulation and deregulation in Transport.						
7-8	5.1 Explain the concept of regulation and deregulation in transport 5.2 Explain government involvement in transport 5.3 Explain the benefits of deregulation. 5.4 Outline government instrument in transport development.	i. Explain the concept of regulation and deregulation in transport ii. Explain government involvement in transport iii. Explain the benefits of deregulation. iv. Explain government instrument in transport	Books. Journals and other relevant materials.			Discuss government involvement in transport Discuss government instrument in transport development.

		developmen t.				
General Objective 6.0: Appreciate the investment opportunities in transport						
9-10	<p>6.1 Define investment opportunities in transport sector</p> <p>6.2 Explain the criteria's for analysis in transport</p> <p>6.3 Explain the rationales for government intervention in transport</p> <p>6.4 Explain the financial appraisal of transport project.</p>	<p>i. Explain investment opportunities.</p> <p>ii. Explain the criteria's for analysis in transport</p> <p>iii. Explain the rationales for government intervention in transport</p> <p>iv. Explain the financial appraisal of transport project.</p>	Textbooks, Journals, Magazines			<p>Discuss the rationales for government intervention in transport</p> <p>Explain the financial appraisal of transport project.</p>
General Objective 7.0: Appreciate management techniques in Transport Enterprise						
11-12	<p>7.1 Define transport enterprise</p> <p>7.2 Highlight types of transport enterprise</p> <p>7.3 Outline procedures of establishing transport enterprise</p> <p>7.4 Highlight techniques for its</p>	<p>i. Explain transport enterprise</p> <p>ii. Discuss types of transport enterprise</p> <p>iii. Explain</p>	Textbooks, Journals, Magazines			Discuss types of transport enterprise

	management	formation of transport enterprise iv. Explain management principles of transport enterprise				
--	------------	--	--	--	--	--

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: RURAL TRANSPORT OPERATIONS AND MANAGEMENT	Code: TPM 424	Credit Hour: 2 Credit Unit:2
	Pre-requisite:	Theoretical: 2 hours/week
Year:1 Semester: 1		Practical:0 hours/week
Goal: The course is designed to provide students with the required knowledge and skills in rural transport planning.		
General Objectives:		
On completion of this course, students should be able to:		
<ul style="list-style-type: none"> 1.0 Comprehend the rural demographic and economic considerations 2.0 Appraise the factors influencing rural transport 3.0 Comprehend the rural transport services 4.0 Apply the procedure for the preparation of rural transport plan 5.0 Comprehend the rural environmental protection and management strategies 6.0 Appraise rural development efforts in Nigeria. 		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT						
COURSE TITLE: RURAL TRANSPORT OPERATION AND MGT.				COURSE CODE: TPM 424		CONTACT HOURS: 2
GOAL: The course is designed to provide students with the required knowledge and skills in rural transport planning						
COURSE SPECIFICATION:		THEORETICAL CONTENTS			PRACTICAL CONTENTS	
General Objective 1.0: Comprehend the rural demographic and economic considerations						
WEEK	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
1-2	1.1 Define rural demographic and economic considerations 1.2 Explain the features of rural demographic 1.3 Explain the importance of rural demographic with respect to economic considerations.	i. Define rural demographic and economic considerations ii. Explain the features of rural demographic iii. Explain the importance of rural demographic with respect to economic considerations.	Books, journals			Discuss rural demographic and economic considerations
General Objective 2.0: Appraise the factors influencing rural transport						
3-4	2.1 Define rural transport 2.2 Explain factors that	i. Explain rural transport ii. Explain factors that	Books, journals			Discuss the factors that affects

	<p>affects rural transport</p> <p>2.3 Explain changes in rural economy</p> <p>2.4 Explain regional population and demographic change</p>	<p>affects rural transport e.g. changes in social and demographic trends, agriculture, employment, the strength of local economies, and politically sensitive items such as welfare reform</p> <p>iii. Explain changes in rural economy e.g. industrial agriculture, employment, private service industries</p> <p>iv. Explain regional population and demographic changes e.g. Migration to urban centers, Services shifted to large centers</p>				<p>rural transport</p>
--	--	---	--	--	--	------------------------

		and People driving longer distances etc.				
General Objective 3.0: Comprehend the rural transport services						
5-6	<p>3.1 Define rural transport services</p> <p>3.2 Explain the process of rural transport services</p> <p>3.3 Explain rural transport demand, supply and pattern.</p> <p>3.5 Define rural transit services</p> <p>3.6 Explain the features of rural transit services</p> <p>3.7 Explain public transit in rural communities</p>	<p>i. Explain rural transport services</p> <p>ii. Explain the process of rural transport services</p> <p>iii. Explain rural transport demand, supply and pattern.</p> <p>iv. Describe rural transit services</p> <p>v. Explain the features of rural transit services</p> <p>vi. Explain public transit in rural communities</p>	Books, journals			Explain the features of rural transit services
General Objective 4.0: Apply the procedure for the preparation of rural transport plan						
7-8	<p>4.1 Define transport plan</p> <p>4.2 Explain the vision and mission of transport plan</p> <p>4.3 Give procedure for</p>	<p>i. Explain transport plan</p> <p>ii. Explain the vision and mission of</p>	Books, journals,			Discuss the principles of public participati

	<p>plan preparation</p> <p>4.4 Explain the principles of public participation and engagement in rural transport.</p> <p>4.5 Explain the financial strategy for plan, preparation and implementation of rural transport.</p>	<p>transport plan</p> <p>iii. Give procedure for plan, preparation</p> <p>iv. Explain the principles of public participation and engagement in rural transport.</p> <p>v. Explain the financial strategy for plan, preparation and implementation of rural transport.</p>				on and engagement in rural transport.
General Objective 5.0: Comprehend the rural environmental protection and management strategies						
9-10	<p>5.1 Define rural and environmental protection</p> <p>5.2 Define management strategies</p> <p>5.3 Explain rural natural environment</p> <p>5.4 Explain endanger species in rural environment</p>	<p>i. Explain rural and environmental protection</p> <p>ii. Explain management strategies</p> <p>iii. Explain of rural natural environment (e.g., air, water,</p>	Books, journals			Discuss the techniques for evaluating potential impacts on rural

	<p>5.5 Explain the techniques for evaluating potential impacts on rural environment</p> <p>5.6 Explain the strategies and legislations for environmental Protection</p>	<p>iv. Explain endanger species in rural environment</p> <p>v. Explain the techniques for evaluating potential impacts on rural environment</p> <p>vi. Explain the strategies and legislations for environmental protection</p> <p>vii. protection</p>				
General Objective 6.0: Comprehend the rural development efforts in Nigeria						
11-12	<p>6.1 Explain the rationales for rural development programmes</p> <p>6.2 Trace rural development programmes in Nigeria</p> <p>6.3 Trace stakeholders in rural development programme</p> <p>6.4 Explain the problems and prospect of rural</p>	<p>i. Explain the rationales for rural development programmes</p> <p>ii. Trace rural development programmes in Nigeria</p> <p>iii. Trace stakeholders in rural development</p>	Books, journals			Discuss the problems and prospect of rural development programme

	<p>development programme</p> <p>6.5 Explain rural development programmes in Nigeria</p>	<p>programmes e.g FGN, WB, IMF, FAO, CBN e</p> <p>iv. Explain problems and prospects of rural development programmes</p> <p>v. Explain rural development programmes e.g. ADP, RBDAs, DIFPRI, Rural Access and Mobility Project etc.</p>				
--	---	---	--	--	--	--

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: LOGISTICS AND SUPPLY CHAIN MANAGEMENT	Code: TPM 425	Credit Hour: 2 Credit Unit:2
	Pre-requisite:	Theoretical:2 hours/week
Year:1 Semester: 1		Practical 0 : hours/week
Goal: This course is designed to provide students with required knowledge and skills in logistics and supply chain management.		
General Objectives:		
On completion of this course, the student should be able to:		
<ul style="list-style-type: none"> 1.0 Comprehend the meaning and concepts of logistics 2.0 Comprehend the concepts of supply chain management 3.0 Appreciate the art of physical distributions, operations and process. 4.0 Appreciate warehousing/ storage operations as vital component of logistic functions. 5.0 Comprehend handling systems and equipment used in logistics and supply chain operations. 6.0 Comprehend the parcel delivery/courier service operations. 7.0 Appreciate emerging concepts in logistics and supply chain management 8.0 Comprehend the logistics operations in Nigeria 		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT						
COURSE TITLE: LOGISTICS AND SUPPLY CHAIN MANAGEMENT				COURSE CODE: TPM 425		CONTACT HOURS: 2
GOAL: This course is designed to provide the students with required knowledge and skills in logistics and supply chain management						
COURSE SPECIFICATION:		THEORETICAL CONTENTS		PRACTICAL CONTENTS		
General objective 1.0: Comprehend the nature and components of logistics						
WEEK	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
1	1.1 Define Logistics and supply chain management 1.2 Explain types of logistics and supply chain management 1.3 Trace logistics in 21 st Century 1.4 Explain Customer Service	i. Explain Logistics and supply chain management ii. Explain types of logistics and supply chain management e.g. grocery, food, prints, human, petroleum	Books Journals Magazines CILT Transport Focus Bulletin			Discuss types of logistics and supply chain management

		products, commodities iii. Trace logistics in 21 st Century iv. Explain Customer Service				
General objective 2.0: Comprehend the concepts of supply chain management						
2	2.1 Give definition of Supply Chain Management: 2.2 State the development of supply chain management 2.3 Give the nature and Concept of supply chain 2.4 State the components of Supply Chain 2.5 State the importance of Supply Chain 2.6 Explain Value Chain and participants in Supply Chain	i. Give definition of Supply Chain Management: ii. Explain development of supply chain management iii. Give the nature and Concept of supply chain iv. Explain components of Supply Chain v. Discuss				

		importance of Supply Chain vi. Explain Value Chain and participants in Supply Chain				
General Objective 3.0: Appreciate art of physical distributions, operations and process.						
3-4	3.1 Define physical distribution and operation process 3.2 Explain channel of distribution and logistics process. 3.3 Explain route and schedule in logistics. 3.4 Explain process of distribution.	i. Explain physical distribution and operation process Explain channel of distribution and logistics process. ii. Explain route and schedule in logistics. iii. Explain process of distribution e.g consolidation, distribution, fragmentation	Books Journals Magazines CILT Transport Focus Bulletin			Explain channel of distribution and logistics process.
General Objective 4.0: Appreciate warehousing operations as vital component of logistics functions						
5-6	4.1 Define terms warehousing 4.2 Explain the types of	i. Explain the terms warehouse				Explain factors to

	<p>warehousing</p> <p>4.3 Identify warehousing operations.</p> <p>4.4 Explain factors to be considered in locating warehousing</p> <p>4.5 Explain warehouse storage equipment</p> <p>4.6 Define inventory management</p>	<p>e.g stocks, warehousing, warehouse, depots, unit load, consignment, storage</p> <p>ii. Explain the types of warehousing</p> <p>iii. Identify warehouse operations.</p> <p>iv. Explain factors to be considered in locating warehouse</p> <p>v. Explain warehouse storage equipment</p> <p>vi. Explain inventory management</p>	<p>Books</p> <p>Journals</p> <p>Magazines</p> <p>CILT Transport Focus Bulletin</p>			<p>be considered in locating warehousing</p>
General Objective 5.0: Comprehend handling systems and equipment used in logistics and operations management						
7-8	<p>Explain handling of equipment in warehousing</p> <p>5.2 Explain the principles of operating warehouse equipment.</p> <p>5.3 Discuss powered industrial trucks and attachment.</p>	<p>i. Explain handling of equipment in warehousing e.g cranes, forklifts, conveyor belt, elevator etc.</p> <p>ii. Explain the</p>	<p>Books</p> <p>Journals</p> <p>Magazines</p> <p>CILT Transport Focus Bulletin</p>			<p>Discuss the principles of operating warehouse equipment</p>

	5.4 Explain how to maintain warehouse equipment	<ul style="list-style-type: none"> iii. Describe powered industrial trucks and attachment. iv. Explain how to maintain warehouse equipment 				
General Objective 6.0: Comprehend parcel delivery/courier service operations						
9-10	6.1 Define parcel delivery /courier service operations 6.2 Trace the history of parcel delivery/courier service operations 6.3 Explain the operations and patronage of parcel delivery service 6.4 Explain parcel delivery regulations and operations in Nigeria 6.5 Explain the importance of parcel delivery to national economy 6.6 Explain the threats to parcel	<ul style="list-style-type: none"> i. Explain parcel delivery /courier service operations ii. Explain the history of parcel delivery/courier service operations iii. Explain the operations and patronage of parcel delivery service iv. Explain parcel delivery regulations and operations in Nigeria 	Books Journals Magazines CILT Transport Focus Bulletin			Discuss the importance of parcel delivery to national economy

	delivery, operation and service	<ul style="list-style-type: none"> v. Explain the importance of parcel delivery to national economy vi. Explain the threats to parcel delivery, operation and service 				
General Objective 7.0: Appreciate emerging concepts in logistics and supply chain						
11-12	<p>7.1 Explain the concepts in logistics and supply chain.</p> <p>7.2 Explain the hub and spoke model</p> <p>7.3 Explain the importance of logistics/intermodal concepts</p> <p>7.4 Explain the principles of home shopping.</p> <p>7.5 Trace the emerging trends in logistics.</p>	<ul style="list-style-type: none"> i. Explain the concepts in logistics and supply chain.e.g. Just-in-time, just-in-place, reliability, quality, distribution, flexibility etc. ii. Explain the hub and spoke model iii. Explain the importance of logistics/intermodal concepts e.g. piggyback, fishy back, air truck, 	<p>Books</p> <p>Journals</p> <p>Magazines</p> <p>CILT Transport Focus Bulletin</p>			Discuss the importance of logistics/intermodal concepts

		spoke and hub; point to point etc. iv. Explain the principles of home shopping. v. Explain the emerging trends in logistics				
General Objective 7.0 Comprehend the logistics operations in Nigeria						
13-14	7.1 Explain the roles of logistics in national development. 7.3 Explain haulage structure/operations 7.4 Explain key operators in Nigeria logistics NIPOST, Dangote Group, FedEx, DHL, UPS, EMS, Mersk, Panapina etc. 7.5 State logistics operators in Nigeria 7.6 Explain regulations for logistics industry 7.7 Explain constraints to logistics operations in the country	i. Explain the roles of logistics in national development. ii. Explain haulage structure/operations iii. Explain key operators in Nigeria logistics NIPOST, Dangote Group, FedEx, DHL, UPS, EMS, Mersk, Panapina etc. iv. State logistics operators in Nigeria v. Explain regulations	Books Journals Magazines CILT Transport Focus Bulletin			Explain logistics operators in Nigeria Discuss constraints to logistics operations in the country

		for logistics industry vi. Explain constraints to logistics operations in the country				
--	--	--	--	--	--	--

Programme: Higher National Diploma (HND) in Transport Planning and Management		
CourseTitle: MARITIME TRANSPORT OPERATIONS AND MANAGEMENT	Code: TPM 426	Contact Hour: 2-0 Credit Unit: 2.0
	Pre-requisite: No	Theoretical: 2 hours/week
Year:1 Semester: 1		Practical: 0 hours/week
Goal: The course is designed to provide students with the knowledge and skill of operations in the maritime industry.		
General Objectives: On completion of this course, the student should be able to: <ol style="list-style-type: none"> 1.0 Comprehend the nature and characteristics of maritime industry 2.0 Appraise seaports operations 3.0 Analyse the structure of shipping company and shipping market. 4.0 Appreciate maritime policies 5.0 Comprehend the structure of the Nigerian maritime industry 6.0 Appreciate maritime safety and security 		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT						
COURSE TITLE: MARITIME TRANSPORT OPERATIONS & MGT.			COURSE CODE: TPM 426	CONTACT HOURS: 2-0-0		
GOAL: The course is designed to provide students with the knowledge and skill of operations in the maritime industry						
COURSE SPECIFICATION:		THEORETICAL CONTENTS		PRACTICAL CONTENTS		
General objective 1.0: Comprehend the nature and characteristics of the maritime industry						
WK	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
1-2	1.1 Define Maritime transport 1.2 Explain the characteristics of the maritime industry 1.3 Explain maritime industry facilities and provisions	Explain Maritime transport Explain the characteristics of the maritime industry Explain maritime industry facilities and provisions	Books, Journals, Magazines, CILT/CIoTA Bulletin, Websites, Research reports, Newspapers, Policy documents, drones, GPS, Manuals, maps, GIS, Camera			Discuss the nature and characteristics of maritime industry
General Objective 2.0: Appraise seaport operations						
3-4	2.1 Define the seaport 2.2 Explain the nature of seaport operations 2.3 Analyse organizational structure of seaport 2.3 Appraise seaport facilities for operations 2.4 Appreciate the	Explain the seaport Explain the nature of seaport operations Analyse organizational structure of seaport Appraise seaport facilities for operations Appreciate the roles	Books, Journals, Magazines, CILT/CIoTA Bulletin, Websites, Research reports, Newspapers, Policy documents, drones,			Discuss the nature of seaport operations

	roles and responsibilities of various agencies in seaport operations.	and responsibilities of various agencies in seaport operations.	GPS, Manuals, maps, GIS, Camera			
General Objective 3.0: Analyse the structure of shipping company and shipping market.						
5-6	3.1 Define shipping company and shipping market 3.2 Analyse the process of establishing shipping company 3.3 Apply the procedures for fleets acquisition and expansion 3.4 Analyse the nature of market in shipping industry 3.5 Appraise factors for success and failure of shipping company operations	Explain shipping company and shipping market 3.2 Analyse the process of establishing shipping company 3.3 Apply the procedures for fleets acquisition and expansion 3.4 Analyse the nature of market in shipping industry 3.5 Appraise factors for success and failure of shipping company operations	Books, Journals, Magazines, CILT/CIoTA Bulletin, Websites, Research reports, Newspapers, Policy documents, drones, GPS, Manuals, maps, GIS, Camera			Discuss factors for success and failure of shipping company operations
General Objective 4.0: Appreciate maritime policies						
9-10	4.1 Comprehend evolution of maritime policies 4.2 Analyse the objectives of maritime policies	i. Comprehend evolution of maritime policies globally. ii. Analyse the objectives of	Books, Journals, Magazines, CILT/CIoTA Bulletin, Websites,			Explain the objectives of maritime policies in Nigeria

	4.3 Appraise the effectiveness of maritime policies in Nigeria.	maritime policies iii. Appraise the effectiveness of maritime policies in Nigeria.	Research reports, Newspapers, Policy documents, drones, GPS, Manuals, maps, GIS, Camera			
General Objective 5.0: Comprehend the structure of the Nigerian maritime industry						
11	5.1 Analyse the structure of the Nigerian maritime industry 5.2 Explain the roles of each in 5.1 to the nation's development 5.3 Analyse the legal frameworks for each in 5.1	Analyse the structure of the Nigerian maritime industry Explain the roles of each in 5.1 to the nation's development Analyse the legal frameworks for each in 5.1	Books, Journals, Magazines, CILT/CIoT Bulletin, Websites, Research reports, Newspapers, Policy documents, drones, GPS, Manuals, maps, GIS, Camera			Examine the legal framework for the maritime industry in Nigeria
General Objective 6.0: Appreciate maritime safety and security						
12-13	6.1 Define maritime safety and security 6.2 Explain the maritime safety conventions 6.3 Explain the maritime security conventions 6.4 Appraise risk and threat assessment methods in maritime	Explain maritime safety and security Explain the maritime safety conventions Explain the maritime security conventions Appraise risk and threat assessment methods in maritime	Books, Journals, Magazines, CILT/CIoT Bulletin, Websites, Research reports, Newspapers, Policy documents,			Discuss risk and threat assessment methods in maritime operation

	operation	operation	drones, GPS, Manuals, maps, GIS, Camera SOLAS convention and ISPS Code			
--	-----------	-----------	--	--	--	--

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: PROFESSIONAL ETHICS AND PRACTICE IN TRANSPORT	Code: TPM 427	Credit Hour:3 Credit Unit:2
	Pre-requisite:	Theoretical: 2 hours/week
Year:1 Semester: 1		Practical 0 : hours/week
Goal: This course is designed to ensure that students understand the importance of ethical considerations in every aspect of transport planning and operations.		
General Objectives:		
On completion of this course, students should be able to:		
<ul style="list-style-type: none"> 1.0 Comprehend profession and professionalism 2.0 Appreciate professionalism in transport 3.0 Comprehend the nature of professional organizations in the society/built environment. 4.0 Appreciate the provisions for transport cadre in public and private sectors 5.0 Comprehend the instruments for practicing transport profession 6.0 Comprehend the code of professional conduct and practice of Transport 7.0 Appreciate the nature and scope of professional/consultancy services in transport 		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT						
COURSE TITLE: PROFESSIONAL PRACTICE IN TRANSPORT			COURSE CODE: TPM 427		CONTACT HOURS: 2	
GOAL: This course is designed to ensure that students understand the importance of ethical considerations in every aspect of transport planning and operations.						
COURSE SPECIFICATION:		THEORETICAL CONTENTS		PRACTICAL CONTENTS		
General Objective 1.0: Comprehend profession and professionalism						
WEEK	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
1	1.1 Define profession, professionalism and professional. 1.2 Explain the evolution and features of profession 1.3 Explain the historical development of profession.	i. Define profession, professionalism and professional ii. Explain evolution and features of profession iii. Explain the historical development of profession.	Books, journals, and internet			Discuss the historical development of profession.
General Objective 2.0: Appreciate professionalism in transport						

2-3	<p>2.1 Explain transport as a profession.</p> <p>2.2 Explain the components of transport profession.</p> <p>2.3 Explain the role of government in the profession of transport</p>	<p>i. Explain transport as a profession.</p> <p>ii. Explain the components of transport profession.</p> <p>iii. Explain the role of government in the profession of transport</p>	Books, journals, and internet			Discuss the components of transport profession.
General Objective 3.0: Comprehend the nature of professional organizations in the society/built environment.						
3-4	<p>3.1 Define professional organization</p> <p>3.2 Explain professionals in the built environment.</p> <p>3.3 Explain the features of each professional organization in the built environment</p> <p>3.4 Explain the function and responsibilities of professional organizations.</p> <p>3.5 Explain professional bodies in Nigerian</p>	<p>i. Explain professional organization</p> <p>ii. Explain professionals in the built environment</p> <p>iii. Explain the features of each professional organization in the built environment</p> <p>iv. Explain the</p>	Books, journals , and Internet			Discuss the nature of synergy among the Nigerian professional bodies

	<p>built environment</p> <p>3.6 Explain legal framework of the professional bodies in the built environment.</p> <p>3.7 Explain the nature of synergy among the Nigerian professional bodies</p>	<p>function and responsibilities of professional organizations.</p> <p>v. Explain professional bodies in Nigerian built environment eg APBN, NSE, COREN, NITP, TOPREC, NIA, ARCON, NIS, SURCON, NIOB, CORBON</p> <p>vi. Explain legal framework of the professional bodies in the built environment</p>				
--	--	---	--	--	--	--

		vii. Explain the nature of synergy among the Nigerian professional bodies				
General Objective 4.0 Appreciate the provisions for transport cadre in public and private sectors						
	4.1 List composition of National Council on Transport 4.2 Explain transport cadre in civil/public and private practice 4.3 Outline the requirement(s) for cadre migration and upgrading in civil/public and private sector	i. Discuss the composition and responsibilities of the National Council on Transport ii. Explain the establish cadre for transport in public and private practice iii. Explain the requirements for cadre migration and upgrading in public and private sector	Books, Journals, Circulars and Internet, Newsletter Bulletin			Explain the established cadre for transport in public and private sector.
General Objective 5.0: Comprehend the instruments for practicing transport profession						
6-9	5.1 Explain the procedures for membership of professional	Explain the procedures for membership of professional	CioTA Law; Laws of the chartered ILT in UK and			Discuss the laws establishing the

	<p>organization.</p> <p>5.2 Explain the rights and duties of professional member.</p> <p>5.3 Explain the laws establishing the Chartered Institute of Logistics and Transport and Institute of transport Administration in Nigeria.</p> <p>5.4 Examine the contents of the laws</p>	<p>organization e.g.CIoTA and CILT</p> <p>5.5 Explain the rights and duties of professional member.</p> <p>5.6 Explain the laws establishing the Chartered Institute of Logistics and Transport and Institute of transport Administration in Nigeria.</p> <p>5.7 Describe the contents of the laws.</p>	<p>Nigeria CILT, CIoTA and CILT handbook, Annual report; conference proceedings</p>			<p>Chartered Institute of Logistics and Transport and Institute of transport Administration in Nigeria.</p>
General Objective 6.0: Comprehend the code of professional conduct and practice of Transport						
10-11	<p>5.1 Define code of practice as its relate to professional conduct</p> <p>5.2 Explain the code of professional conduct and practice of the</p>	<p>i. Explain code of practice as its relate to professional conduct</p> <p>ii. Explain the</p>	<p>Professional code of conduct and practice in Nigeria and the UK, CIoTA and CILT handbook,</p>			<p>Discuss the professional obligations in the code of</p>

	<p>profession.</p> <p>5.3 Explain the code in all activities of the transport</p> <p>5.4 Explain professional integrity in the code of professional conduct and practice</p> <p>5.5 Explain the professional obligations in the code of professional conduct and practice</p> <p>5.6 Examine the ethics of the profession</p>	<p>code of professional conduct and practice of the profession.</p> <p>iii. Explain the code in all activities of the transport</p> <p>iv. Explain professional integrity in the code of professional conduct and practice</p> <p>v. Explain the professional obligations in the code of professional conduct and practice</p> <p>vi. Explain the ethics of the profession</p>	<p>Annual report; conference proceedings</p>			<p>professional conduct and practice</p>

General objective 7.0: Appreciate the nature and scope of professional/consultancy services in transport						
12-14	<p>6.1 Differentiate between consultancy and consultant</p> <p>6.2 Explain consultancy in transport services</p> <p>6.3 Explain the procedure for consultancy services.</p> <p>6.4 Explain the challenges of consultancy services in transport</p>	<p>i. Differentiate between consultancy and consultant</p> <p>ii. Explain consultancy in transport services</p> <p>iii. Explain the procedure for consultancy services.</p> <p>iv. Explain the challenges of consultancy services in transport</p>	<p>Professional code of conduct and practice in Nigeria and the UK, CioTA and CILT handbook, Annual report; conference proceedings</p>			<p>Discuss the challenges of consultancy services in transport</p>

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: PROJECT	Code: TPM 428	Credit Hour: 3 Credit Unit:3
	Pre-requisite:	Theoretical:3 hours/week
Year:1 Semester: 1		Practical 0 : hours/week
Goal: This course is designed to enable the student demonstrate skill in research, and in undertaking independent study on Transportation Planning and management.		
General Objectives: On completion of this course, the student should be able to: 1.0 Appreciate the purpose of undertaking project in Transport Planning and Management. 2.0 Appreciate the common problems associated with project and independent study 3.0 Appreciate how to collect, collate, interpret and present data in a research work. 4.0 Appreciate the stages involved in terminal project. 5.0 Present terminal project for internal and external assessment		

PROGRAMME: HIGHER NATIONAL DIPLOMA TRANSPORT PLANNING AND MANAGEMENT						
COURSE TITLE: PROJECT			COURSE CODE: TPM 428		CONTACT HOURS:1-0-2	
GOAL: This course is designed to enable the student know how to undertake a detailed independent study on transportation planning and Management						
COURSE SPECIFICATION:		THEORETICAL CONTENTS		PRACTICAL CONTENTS		
General Objective 1.0: Appreciate the purpose of Project.						
WEEK	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
1	1.1 Explain project in relation to transport planning and management 1.2 Explain the importance of project	i. Explain project in relation to transport planning and management ii. Explain the importance of project	Books, Journals and other relevant materials.			
General Objective 2.0: Appreciate the common problems associated with project						
	2.1 Explain choice of project topic 2.2 Differentiate between researchable and non-researchable topics 2.3 Enumerate problems expected on the field e.g. questionnaire administration gathering of data etc. 2.4 Explain how to solve identified problems importance of	i. Explain how topics are chose ii. Explain different type of resources iii. Explain the importance of transportation resources iv. Explain probable solution to identified problems with project work.	Conference papers and literature from FMT, NSC, NPA, FRSC etc.			

	transportation resources					
General Objective 3.0: Appreciate how to collect, interpret and present data						
	3.1 Explain methods of data collection 3.2 Distinguish between various sampling techniques 3.3 Describe methods of data interpretation 3.4 Describe methods of data presentation	i. Explain methods of data collection ii. Explain the various sampling techniques iii. Describe data interpretation and presentation	Conference papers and literature from FMT, NSC, NPA, FRSC etc			
General Objective 4.0: Appreciate the stages involved in terminal project						
	4.1 Explain the arrangement of ideas in a sequence. 4.2 Provide the completed work 4.3 Bind the work in book form 4.4 Present the project individually to assessors	i. Explain idea in sequence ii. Guide student to produce the completed work	Past projects			

Programme: Higher National Diploma (HND) in Transport Planning and Management		
Course Title: TRANSPORT PLANNING DESIGN VIII (SEAPORT FACILITY DESIGN)	Code: TPM 429	Credit Hour: 5 Credit Unit: 3
	Pre-requisite:	Theoretical: 1 hours/week
Year:1 Semester: 1		Practical 4 : hours/week
Goal: The course is designed to equip students with knowledge and skills to plan, design and inspect seaport facilities		
General Objectives:		
On completion of this course, students should be able to:		
12.0 Comprehend seaport facilities		
13.0 Assess the factors in the planning and design of seaport facility components		
14.0 Apply safety regulation within the seaport facility		
15.0 Describe the inspection of facilities in a seaports		
16.0 Prepare plan and technical report for seaport facility		

PROGRAMME: HIGHER NATIONAL DIPLOMA IN TRANSPORT PLANNING AND MANAGEMENT						
COURSE TITLE: TRANSPORT PLANNING DESIGN VII (SEAPORT FACILITY DESIGN)				COURSE CODE: TPM 429	CONTACT HOURS: 5	
GOAL: The course is designed to equip students with knowledge and skills to plan, design and inspect seaport facilities						
COURSE SPECIFICATION:		THEORETICAL CONTENTS		PRACTICAL CONTENTS		
General objective 1.0 Comprehend seaport facilities						
WK	Specific Learning Objective	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Evaluation
1-2	1.11 Define seaport 1.12 Explain the concept of seaport facility and its components. 1.13 Explain the features of seaport facilities. 1.14 Explain the types and functions of seaport facilities. 1.15 Apply spatial planning requirements for seaport facility planning and design.	1.16 Explain seaport 1.17 Explain the concept of seaport facility and its components. 1.18 Explain the features of seaport facilities. 1.19 Explain the types and functions of seaport facilities. 1.20 Apply spatial planning requirements for seaport facility planning and design.	Relevant textbooks, Maps, Research report, and Computer Units.			Discuss the concept of seaport facility.
General Objective 2.0: Assess the factors in the planning and design of seaport facility components						
	2.1 Explain the components for designing seaport facilities. 2.2 Explain the scope,	Explain the components for designing seaport facilities. Explain the scope,	Relevant textbooks, Maps,	Demonstrate the uses of the components and techniques for	Guide students to: Use the	Discuss the factors that influence seaport

	<p>principles and techniques for designing seaport facilities.</p> <p>2.3 Explain the factors that influence seaport facility design.</p> <p>2.4 Apply spatial planning requirements and standards for seaport facility design.</p>	<p>principles and techniques for designing seaport facility.</p> <p>Explain the factors that influence seaport facility design</p> <p>Apply spatial planning requirements and standards for seaport facility design.</p>	<p>Research report, and Computer Units.</p>	<p>designing seaport facilities.</p> <p>Illustrate the components of a seaport.</p> <p>Design and interpret the layout for a seaport</p>	<p>components and techniques for designing seaport facilities.</p> <p>Illustrate the components of a seaport.</p> <p>Design and interpret the layout for a seaport</p>	<p>facility design.</p>
17.0 General Objective 3.0: Apply safety regulation within the seaport facility						
	<p>2.6 Define Personal Protective Equipment (PPEs).</p> <p>2.7 Apply safety regulation on seaport facilities</p> <p>2.8 Explain types of disaster that affect seaport facilities</p>	<p>Apply safety regulation on seaport facilities</p> <p>Explain types of disaster that affect seaport facilities</p>	<p>Books, Journals, Magazines, CILT/CIoTA Bulletin, and research reports</p>	<p>Demonstrate the usage of Personal Protective Equipment (PPEs) within the seaport facility</p>	<p>Guide students to use the PPEs within seaport facility</p>	<p>Discuss safety regulation and rules in seaport facility</p>
General Objective 4.0: Describe the inspection of facilities in a seaport						
	<p>4.1 Explain Inspection of a facility</p> <p>4.2 Explain the methods of inspecting a seaport facility</p> <p>4.3 Explain the concept of inspecting a seaport facility</p>	<p>Explain Inspection of a facility</p> <p>Explain the methods of inspecting a seaport facility</p> <p>Explain the concept of inspecting a seaport facility</p>	<p>Books Journals Manuals Base Maps Drawing Materials Cameras</p>	<p>Carry out the process of inspecting a seaport facility</p>	<p>Guide students through the process of inspecting a seaport facility</p>	<p>Discuss the methods and process of inspecting a seaport facility.</p>

			GPS etc.			
General Objective 5.0: Prepare plan and technical report for seaport facility						
	<p>5.8 Explain a plan and technical report of a seaport facility</p> <p>5.9 Explain how to write a plan report</p> <p>5.10 Explain how to write a technical report on a seaport facility</p>	<p>Explain a plan and technical report of a seaport facility</p> <p>Explain how to write a plan report</p> <p>Explain how to write a technical report on a seaport facility</p>	<p>Books</p> <p>Journals</p> <p>Magazines</p> <p>Manuals</p> <p>CILT/CIoTA</p> <p>Bulletin</p> <p>Drone,</p> <p>Base Maps,</p> <p>GPS,</p> <p>GIS,</p> <p>TransCAD,</p> <p>Cameras</p> <p>Manuals</p>	5.1 Prepare a plan and technical report of a seaport facility	Guide students to Prepare a plan and technical report of a seaport facility	Discuss a technical report of a seaport facility

PHYSICAL FACILITIES FOR TRANSPORT PLANNING & MANAGEMENT (ND & HND):

- a) CLASSROOMS/DRAWING STUDIOS**
- b) DRIVING/TRAFFIC SIMULATOR LABORATORY**
- c) TRAFFIC INFORMATION/GIS LABORATORY**
- d) AUTOMOBILE WORKSHOP**
- e) EXHIBITION ROOM**
- f) DRIVING RANGE**
- g) MECHANICAL/SOIL MECHANICS LABORATORY (Shared Facility)**
- h) RESOURCE CENTRE**

[A] List of Minimum Resources in the Classrooms/Drawing Studios.

- a) 2Nos. Standard Classrooms/Drawing Studios each for ND & HND Levels to accommodate at least 40 students at a time.**

S/N	Tool/Equipment	No Required
1.	Standard Drawing Boards with Drafting Machine	40
2.	Light Table	2
3.	Standard Stools	40
4.	Set of White Board Drawing Instruments	2
5.	Overhead Projector	1
6.	Projector Screen	1
7.	Slide Projector	1
8.	Drawing Cabinets	4
9.	Set of Drawing Pen	2 sets
10.	Lettering Set	2 sets
11.	Adjustable Square	2
12.	Exhibition Board Fitted with Stands	2

13. Large Table of Enlargement and Reduction	1
14. Scientific Calculator	1
15. Circle Template	2
16. French Curve	2
17. Ellipse Template	2
18. Fixture Template	2
19. Flexible Curve	3
20. Standard T-Square	40
21. Pencil Sharpeners	2
22. Pocket Stereoscope	5
23. Scale Rules	2

[B] List of Minimum Resources in the Driving/Traffic Simulator Laboratory (ND & HND)

S/N	Tool/Equipment	No Required
1.	Auto Counter (Metro Count Classifier)	1
2.	Car Driving Simulator	2
3.	Traffic Cone	5
4.	Traffic Bar	5
5.	Road Survey Sign Post	5
6.	Wireless Mobile Traffic Monitoring and DATA Collection System	1
7.	Traffic Analyzer (On-Pavement Sensor) for Count and Speed Measurement	1
8.	Automatic Traffic Recorders	1
9.	Radar Speed Guns	1
10.	Functional Computer System	1
11.	RS-600 Driving Simulator Model Designed for use in Ground Vehicle Training and Assessment Applications	1

12. Vehicle for Driving Training Car 2 (Pooled)

[C] List of Minimum Resources in the Traffic Information/GIS Laboratory (ND & HND)

S/N	Tools/Equipment	NO.Required
1.	Functional Desktop computer systems, accessories and software	40
2.	Transport Planning Software such as TransCAD for Microscopic, PTV VISSIM, ARCGIS, AutoCAD, TransMoldeler for Microscopic, City Traffic Simulator for Micro Simulation	1 each
3.	Computer Printers	2
4.	Local Maps(Road Maps, Settlement Maps, Land Use Maps, Transport Facility Plan, Airport and Railway Terminals	1 each per student
5.	A0 Plotter	1
6.	A3 Printer	1
7.	Photostatting Machine	1
8.	Mobile Traffic and Wireless Communication System	1
9.	GPS Vehicle Tracking Equipment	1
10.	Traffic Analyzer	1
11.	Vehicle for Field Trip and Survey	1 (Pooled)

[D] List of Minimum Resources in the Automobile Workshop (ND & HND)

S/N	Tools/Equipment	No Required
1.	Digital Camera	5
2.	Video Camera	5
3.	Traffic Counter (Manual)	40
4.	Digital Counter	5
5.	Auto Counter (Metro Count Classifier)	1
6.	Volume Counter	2
7.	Hat	40

- 8. Rail Coat 40
- 9. Trimming Machine 1
- 10. Steel Cabinets 1
- 11. Traffic Signs and Signal Postal Varieties
- 12. Traffic Cone 5
- 13. Traffic Bar5
- 14. Wireless Mobile Traffic Monitoring and DATA Collection System 1

[E] List of Minimum Resources in the Driving Range (ND & HND)

S/N Tools/Equipment No Required

- 1. First-Aid Kit 1
- 2. Flare or Hazard Cones 1
- 3. Spare Tire 1
- 4. Jack and Lug 1
- 5. Wrench 1
- 6. Tire Pressure Gauge 1
- 7. Fire Extinguisher 1
- 8. Sand Buckets 2
- 9. Flash Light 1

[F] List of Minimum Resources in the Exhibition Room (ND & HND)

S/N	Tools/Equipment	No Required
1.	Local Maps (Road Maps, Settlement Maps, Land Use Maps, Transport Facility Plan, Airport and Railway Terminals per student	1 each
2.	Steel Cabinets	1
3.	Models of Vehicle in all Roads	1 each model vehicle

[