

29.3.0 INDUSTRIAL ORGANIZATION AND MANAGEMENT

29.3.01 Introduction

The module unit is designed to enable the trainee develop knowledge, skills, attitudes and the necessary competence required for enhancing management practices, leadership, interactive and supervisory skills in work places and related environments. The module unit trainee is also expected to understand the economic factors affecting the enterprise they are in and how to tackle them.

29.3.02 General Objectives

At the end of the module unit, the trainee should be able to;

- a) Understand the development of management systems
- b) Discuss the significance of management in enterprises
- c) Apply production management practices in the real world of work
- d) Appreciate the need for inculcating management principles for harmony in the work environment
- e) Manage Organizations effectively
- f) Apply relevant qualitative techniques to solve management problems

29.3.03 Module Unit Summary and Time Allocation

Industrial Organisation and Management

Code	Sub Module Unit	Content	Time Hrs
29.3.1	Economics	<ul style="list-style-type: none">• Definition of the term economics• The concept of economics• The concept of production• Relationship between value, utility and production• Division of labour, specialization, automation and mechanization	4
29.3.2	Trade	<ul style="list-style-type: none">• The concept of demand supply, price, trade demand, supply curves.• Demand, supply and price• The concept of money• The role of banks and financial institutions• Role of international trade and foreign exchange	4

		<ul style="list-style-type: none"> • The role of the world bank, IMF and other development partners 	
29.3.3	Business Law	<ul style="list-style-type: none"> • Business Law and Company Law • Liabilities of Business • Contracts and the Law of contracts • Legal position of a business • Bankruptcy of a business and winding up 	4
29.3.4	Management Principles	<ul style="list-style-type: none"> • Definition of Management • Concept of Management • History and Evolution of management • Types of management • Functions of management • Organization of functions of management • Advantages and Disadvantages of organization management • Basic principles of organizations • The concept of authority, responsibility and accountability • Management By Objectives 	6
29.3.5	Project Planning and Management	<ul style="list-style-type: none"> • Project management • Project planning • Critical Path Analyses • Costing • Resource Loading and scheduling in a project • Project activity costing and base lining • Project progress • Project Commissioning 	8
29.3.6	Office Administration	<ul style="list-style-type: none"> • The Office • Functions of an office • Office Equipment • Office Organization & Administration 	4
29.3.7	Production Management	<ul style="list-style-type: none"> • Production Planning activities. • Product development • Quality of a product control • Statistical Quality control • Control charts and sampling features 	8

		<ul style="list-style-type: none"> • Inspection • Procedure for material procurement and stores • Work study • Features and constraints of a Production Plant • Plant location • Types of production • Plant layout 	
29.3.8	Plant Maintenance	<ul style="list-style-type: none"> • Importance of maintenance of plant and organization • Benefits of planned maintenance • Effective maintenance requirements 	6
29.3.9	Human Resource Management	<ul style="list-style-type: none"> • Structures of human resource management • Recruitment and selection of employees • Sources of stress at work places and stress management • The role of trade unions 	8
29.3.10	Finance and Budgeting	<ul style="list-style-type: none"> • Financial control methods • Elements of costs • Budgeting control • Accounting procedures • Sales strategies 	8
29.3.11	Result Oriented Management	<ul style="list-style-type: none"> • Result oriented management (ROM) • Result Oriented Agreement (ROA) and Specific Measurable Acceptable Relevant Traceable (SMART) management • Steps in ROM • Comparison of ROM, RBM and RBL • Performance Contracts 	6
Total Time			66

29.3.1 ECONOMICS

Theory

29.3.1T0 *Specific Objectives*

By the end of the sub-module unit, the trainee should be able to:

- a) define the term economics
- b) explain the concept of economics
- c) discuss the concept of production
- d) discuss the term utility and value and recognize their relevance to production
- e) discuss the basic factors of production
- f) explain and discuss the concept of, division of labour, specialization mechanization and automation in production

Content

29.3.1T1 Definition of Economics

- i) Identify a definition of economics
- ii) State a standard definition of economics and discuss it.

29.3.1T2 The concept of Economics

- i) Relate the origins and need for economics
- ii) Recognize the universal nature of economics

29.3.1T3 Production

- i) Discuss the concept of production

- ii) Explain and relate the different types and levels of production

29.3.1T4 Utility and Value

- i) Define and explain the terms; utility, value
- ii) Recognize relevance of utility and value in production.

29.3.1T5 Factors of production

- i) Define and explain what factors of production are
- ii) State the main factors of production.
- iii) Discuss the main factor of production and their features

29.3.1T6 Division of labour and specialization

- i) Discuss and explain the origins and need for division of labour.
- ii) Define and discuss specialization
- iii) Discuss the merits and demerits of division of labour and specialization.
- iv) Discuss mechanization and automation of production as consequences of specialization.
- v) Trends in the automation of production and their effects.

Suggested teaching/Learning Activities

- Discussion
- Illustration
- Note taking

Suggested Evaluation Methods

- Oral tests
- Timed written tests
- Assignments

29.3.2 TRADE

Theory

29.3.2T0 *Specific objectives*

By the end of the sub-module unit, the trainee should be able to:

- a) discuss the concepts of demand, supply, and price trade
- b) relate and explain how demand and supply vary with price.
- c) recognize the need for trade
- d) discuss the concept of money
- e) recognize the role of banks and financial institutions
- f) recognize the roles and the need for international trade and foreign exchange
- g) discuss the roles and functions of the world bank, IMF and other development partners

Content

29.3.2T1 Demand, Supply, Price Trade

29.3.2T2 Demand and Supply Curves

- i) Draw and discuss the demand curve

- ii) Draw and discuss the supply curve

- iii) Discuss the conditions under which the demand and supply curves apply.

- iv) Discuss the conditions under which the demand and supply curves do not apply.

29.3.2T3 Need for Trade

- i) Discuss the historical origins of trade
- ii) Discuss the different types of trade

29.3.2T4 Money

- i) Discuss and define the term money.
- ii) Discuss the origins of money and what can constitute it.

29.3.2T5 Banks and Financial Institutions

- i) Discuss the role of banks in general.
- ii) Discuss the role of the central bank.
- iii) Discuss the role of commercial banks.
- iv) Discuss the types and role of financial institutions.

29.3.2T6 International Trade and Foreign Exchange

- i) Discuss international trade and the need for it.
- ii) Discuss the concept of foreign exchange

29.3.2T7

The roles and functions of the World Bank and IMF and their Effect on national economics.

29.3.3 BUSINESS LAW

Theory

29.3.3T0 *Specific Objectives*

By the end of the sub-module unit, the trainee should be able to:

- a) differentiate between business law and company law.
- b) discuss the liabilities of business.
- c) discuss the various aspects of contracts and the law of contract
- d) discuss the legal position of business
- e) explain bankruptcy of Business and Winding up.

Content

29.3.3T1 Business Law V/s Company Law

- Discuss and relate business law with company law

29.3.3T2 Liabilities of Business

- i) The obligations of business to share holders
- ii) The obligations of business to employees
- iii) The obligations of business to creditors
- iv) The obligations of business to other businesses.
- v) The obligations of business to the government

29.3.3T3 Contract Law

- i) Recognize the concept of contract in law

- ii) Requirements for valid contract.

- iii) Methods of executing a contract (General Management)

29.3.3T4 Legal position of a business

29.3.3T5 Bankruptcy and winding up

29.3.3C Competence

The trainee should have the ability to: apply business law in self employment or in the formal employment

Suggested teaching/Learning Activities

- Discussion
- Illustration
- Note taking

Suggested Evaluation Methods

- Oral tests
- Timed written tests
- Assignments

29.3.4 MANAGEMENT PRINCIPLES

Theory

29.3.4T0 *Specific Objectives*

By the end of the sub - module unit, the trainee should be able to:

- a) define the term management
- b) discuss the concept of management.
- c) discuss the history and evolution of management.
- d) describe types of management

- e) state the functions of management
- f) discuss the need for the organizing function of management.
- g) illustrate typical organization management charts.
- h) state the advantages and disadvantages of organization management.
- i) describe the basic principles of organization
- j) explain the concept of authority, responsibility and accountability
- k) describe Management By Objectives (MBO)

Content

- 29.3.4T1 Definition of the term 'management'
- 29.3.4T2 The concept of management
 - i) Administration
 - ii) Ruling
 - iii) Leading
- 29.3.4T3 The history and evolution of management
 - i) Pioneers
 - ii) Fredrick Taylor
 - iii) Henry Fayol
 - iv) Elton Mayo
 - v) Peter Drucker
 - vi) H. Konntz
- 29.3.4T4 Types of management
 - i) Democratic or participative
 - ii) Despotic
 - iii) Laissez-faire
 - iv) Task orient
 - v) human oriented

- 29.3.4T5 Statement of functions of management
 - i) Planning
 - ii) Organizing
 - iii) Implementing or motivating
 - iv) Controlling

29.3.4T6 Need for the organizing function

- 29.3.4T7 Illustration of the typical organization charts
 - Tall and flat organization charts.

29.3.4T8 Advantages and disadvantages of organization management.

- 29.3.4T9 Description of the basic principals of organization
 - Departmentation
 - Informal organizations
 - Roles
 - Synergy
 - Grapevine and its effects

29.3.4T10 Explanation of the concept of authority, responsibility, accountability, and delegation

- i) Power Vs authority
- ii) Effective delegation

29.3.4T11 Description of the management by objectives (M.B.O)

- i) Definition of M.B.O.
- ii) Advantages
- iii) Disadvantages
- iv) Limitations of M.B.O.

Suggested teaching/Learning Activities

- Discussion
- Illustration
- Note taking

Suggested Evaluation Methods

- Oral tests
- Timed written tests
- Assignments

29.3.5 PROJECT PLANNING AND MANAGEMENT

Theory

- 29.3.5T0 *Specific objectives*
By the end of the sub - module unit, the trainee should be able to:
- a) discuss project management overview
 - b) explain project planning needs
 - c) apply critical path analysis in project planning
 - d) discuss resource loading and scheduling in project planning
 - e) discuss project activity costing and base lining
 - f) prepare a project progress report
 - g) explain project commissioning process

Content

- 29.3.5T1 Project management overview
- i) Relationship between resources, time and cost in project planning
 - ii) Information required by different team players involved in project planning
 - iii) The project manager
 - iv) The team leader

- v) The programmer
- vi) The benefits of project management
- vii) Improved communications
- viii) Prediction of potential problem areas

- ix) Systems integration.
- x) Tighter control.
- xi) Better planning.

29.3.5T2 Project planning needs

- i) Choice of required equipment
- ii) Performance specifications
- iii) Planning Cycle
- iv) Project Plan - Activities
- v) Project Plan - Relationships

29.3.5T3 Critical path analysis

- i) Early Date Computations
- ii) Late Date Computations
- iii) Float Computations

29.3.5T4

- Resource loading requirements
- i) Resource Allocation Overview
 - ii) Fixed Time Scheduling
 - iii) Fixed Resource Scheduling
 - iv) Project Summarization

29.3.5T5

- Activity costing
- i) Activity Costing Overview
 - ii) Base lining

29.3.5T6

- Project progress reporting
- i) Project progress
 - ii) actual start date
 - iii) actual finish date

- iv) percent complete
- v) duration left
- vi) work done
- vii) Trend Analysis
- viii) Work Package Costing
- ix) Earned Value Computations

- 29.3.5T7 Commissioning
- i) Handing over obligations
 - ii) Spare parts availability

Suggested teaching/Learning Activities

- Discussion
- Illustration
- Note taking

Suggested Teaching and Learning Resources

A sample case study in their area of specialization.

Suggested Evaluation Methods

- Oral tests
- Timed written tests
- Assignments

29.3.6 OFFICE ADMINISTRATION

Theory

- 29.3.6T0 *Specific Objectives*
- By the end of the sub-module unit, the trainee should be able to:
- a) define and discuss the term office
 - b) discuss the basic functions of an office
 - c) recognize and discuss the need and use of the

various types of office equipment.

- d) discuss the basic principles of office organization and administrations

Content

- 29.3.6T1 Office
- i) Define and discuss the term office.
 - ii) Discuss the need of having an office.
- 29.3.6T2 Functions of an office
- i) Identify and discuss the basic functions of an office.
 - ii) Discuss the effective use of the various pieces of office equipment.
- 29.3.6T3 Office organization and administration
- i) discuss the order of a secretary in an office.
 - ii) discuss the duties of other office personnel.
 - iii) discuss the layout and organization of various types and classes of offices.
- 29.3.6T4 Principles of office organization and administration

- 29.3.6C Competence**
- The trainee should have the ability to: manage a middle level management office

Suggested teaching/Learning Activities

- Discussion
- Illustration
- Note taking

- Role play
- Industrial attachment
- Industrial visit

- l) explain the need for proper plant layout.

Suggested Evaluation Methods

- Oral tests
- Timed written tests
- Assignments

29.3.7 PRODUCTION MANAGEMENT

Theory

29.3.7T0 *Specific Objectives*

- By the end of the sub-module unit, the trainee should be able to:
- a) identify various activities in production, planning.
 - b) discuss the process of product development
 - c) discuss the various concepts of quality of a product
 - d) describe statistical quality control
 - e) demonstrate the use of control charts and sampling features.
 - f) discuss inspection
 - g) explain the procedures for material procurement and stores.
 - h) discuss work study
 - i) describe the features and constraints of production plants.
 - j) discuss the process of choosing the location of a plant.
 - k) state various types of production

29.3.7T1

Content

- Identification of various activities in production planning
- i) Routing
 - ii) Estimating
 - iii) Scheduling
 - iv) Dispatching and progress
 - v) line balancing

29.3.7T2

- Description of Statistical Quality Control (SQC)
- i) Meaning of SQC
 - ii) Merits and demerits of SQC
 - iii) The process of SQC in manufacturing

29.3.7T3

- Demonstration of the use of sampling and control charts
- i) Sampling
 - ii) Population
 - iii) Population standard deviation
 - iv) The process of SQC in manufacturing
 - v) Distributions
 - vi) Binomial
 - vii) Poisson
 - viii) Normal
 - ix) Acceptance sampling
 - x) Producer risk
 - xi) Consumer risk
 - xii) Acceptance quality level
 - xiii) Lot tolerance.
 - xiv) Multiple sampling
 - xv) Gantt charts
 - xvi) Preparation
 - xvii) Advantages and disadvantages
 - xviii) Limitations
 - xix) Networks

- xx) Critical Path Analysis (CPA) features
- xxi) PERT features
- xxii) Identification of critical activities.
- xxiii) Crashing and decompression in cost control of project
- xxiv) Computer use in OPM and PERT
- 29.3.7T4 Discussion of the process of product development
- i) Stages in product design.
- ii) Manufacturing specification
- iii) Process layout
- iv) Product specification
- 29.3.7T5 Discussion of the various concepts of quality of a product
- i) Definition of quality
- ii) Usefulness of product
- iii) Aesthetics
- iv) Material
- v) Brand name
- vi) Control charts
- vii) Assignable causal effects
- viii) Random causal effects
- ix) Variable charts
- x) Attribute charts
- 29.3.7T6 Inspection
- i) Meaning and need for inspection
- ii) Types of inspection
- iii) Inwards
- iv) Outwards or final
- v) Centralized
- vi) Patrol
- vii) Testing schemes
- viii) Destructive simulation.
- 29.3.7T7 Explanation of the procedures for material procurement and stores
- i) Procedures
- ii) Classification of materials used in production
- iii) Role of purchasing department
- iv) Role of the store and its functions
- v) Stores personnel roles and duties
- vi) Stores stationery
- vii) Bin cards
- viii) Stock control cards
- ix) Stock print outs
- x) Computer use in stores
- xi) Material handling
- xii) Stores layout
- 29.3.7T8 Discussion of work study
- i) Concept of work study
- ii) The works of Frank and Lillian and Gilbrath
- iii) Work measurement
- iv) Calculations of actual time, normal time, Standard time and rating.
- v) Allowances of time
- vi) Scrap rates
- vii) Efficiency factors
- viii) Method study
- ix) Recording techniques
- x) Analyzing techniques
- xi) Effective implementation method study

29.3.7T9 Description of the features and constraints of production plants

- i) Features
- ii) Effects of various types of plants on
- iii) Environment
- iv) Local economy
- v) Social outlook of the local community
- vi) Government
- vii) Constraints

29.3.7T10 Discussion of the process of choosing the location of a plant

- i) Steps
- ii) Weighting and ranking methods

29.3.7T11 Settlement of the various types of production.

- i) Job
- ii) Batch
- iii) Flow
- iv) Other

29.3.7T12 Explanation for the need for proper plant layout

- i) Technical requirements
- ii) Legal requirements

29.3.7C Competence

The trainee should have the ability to: manage a production line

Suggested teaching/Learning Activities

- Discussion
- Illustration
- Note taking
- Role play
- Industrial attachment
- Industrial visit

Suggested Evaluation Methods

- Oral tests

- Timed written tests
- Assignments

29.3.8 PLANT MAINTENANCE

Theory

29.3.8T0 *Specific Objectives*

By the end of the sub-module unit, the trainee should be able to:

- a) appreciate the importance of maintenance of plant and its organization.
- b) discuss the benefits of planned-preventive maintenance
- c) describe the requirements for an effective maintenance programme

Content

29.3.8T1 Plant Maintenance Organization

- i) Discuss the various aspects of maintenance and types of maintenance and repair schemes.
- ii) Discuss the general organization of the maintenance department of a large plant i.e. the necessary sections and personnel
- iii) Discuss the basic economics and philosophy of modern maintenance of plant.
- iv) Discuss the need for setting up maintenance and repair policies.

- v) Classify the various maintenance assets.
 - vi) Describe the various maintenance cost control.
 - vii) Planned-Preventive maintenance
 - viii) Define preventive maintenance and contrast it with other types of maintenance
- 29.3.8T2 Benefits and costs of preventive maintenance
- i) Discuss the procedure of setting up and implementing a preventive maintenance scheme for plant
 - ii) Discuss the significance of inspection in planned-preventive maintenance and the determination of the frequency of the inspections
 - iii) Discuss the requirements of having standardized parts and equipment in the plant and the benefit of having adequate stocks of parts
 - iv) Discuss the necessary planning records which should be kept
 - v) Requirements of an effective maintenance programme
 - vi) Models used in maintenance management
 - vii) Reliability

- viii) Maintainability
- ix) Availability
- x) Current Maintenance Strategies
- xi) Business-centered Maintenance (BCM)
- xii) Total Productive Maintenance (TPM)
- xiii) Reliability-centered Maintenance (RCM)
- xiv) Computerized Maintenance Management Systems (CMMS)
- xv) Basic Elements of a CMMS
- xvi) Implementation of a CMMS

29.3.8T2 Requirements for an effective maintenance programme

29.3.8C Competence

The trainee should have the ability to: design and implement maintenance programmes in an industry

Suggested teaching/Learning Activities

- Discussion
- Illustration
- Note taking
- Role play
- Industrial attachment
- Industrial visit

Suggested Evaluation Methods

- Oral tests
- Timed written tests
- Assignments

29.3.9 HUMAN RESOURCE MANAGEMENT

Theory

29.3.9T0 *Specific objectives*

By the end of the sub-module unit, the trainee should be able to:

- a) understand the structures of human resource management
- b) understand the recruitment & selection procedures of personnel
- c) identify sources of stress at work places and understand structures of stress management
- d) explain the role of trade unions in industry

Content

- 29.3.9T1 Human Resource
- i) Management
 - ii) Personnel Policies
 - iii) Organization of personnel
 - iv) Interviews
- 29.3.9T2 Recruitment
Training & staff development
- 29.3.9T3 Stress Management
- i) Sources of stress
 - ii) Symptoms of stress
 - iii) Personnel coping strategies
 - iv) Organization responses to stress avoidance
 - v) Harassment at work places
 - vi) Counseling at work

- 29.3.9T4 Trade Unions
- i) Types of trade unions
 - ii) Employers association
 - iii) Work place representation
 - iv) Employer participation
 - v) Collective agreement
 - vi) Trade disputes
 - vii) Picketing
 - viii) Ballots
 - ix) Employment contract
 - x) Redundancy
 - xi) Industrial courts

29.3.9C Competence

The trainee should have the ability to: manage human resource

Suggested teaching/Learning Activities

- Discussion
- Illustration
- Note taking
- Role play
- Industrial attachment
- Industrial visit

Suggested Evaluation Methods

- Oral tests
- Timed written tests
- Assignments

29.3.10 FINANCE AND BUDGETING

Theory

29.3.10T0 *Specific Objectives*

By the end of the sub-module unit, the trainee should be able to:

- a) explain financial control methods

- b) describe elements of costs
- c) explain budgeting control
- d) describe accounting procedures
- e) explain sales strategies

Suggested Evaluation Methods

- Oral tests
- Timed written tests
- Assignments

29.3.11 RESULT ORIENTED MANAGEMENT

Theory

- Content*
- 29.3.10T1 Explain financial control methods
 - 29.3.10T2 Elements of cost
Material
 - i) Labour cost
 - ii) Overhead cost
 - iii) Direct cost
 - 29.3.10T3 Budgeting control
 - i) Planning
 - ii) Control
 - iii) Forecasting
 - 29.3.10T4 Accounting procedures
 - i) Loss / profit
 - ii) Balance sheet
 - iii) Cash flow statements
 - 29.3.10T5 Sales strategies
 - i) Promotion
 - ii) Competition
 - iii) Marketing
 - iv) Advertisement

- 29.3.11T0 *Specific objectives*
By the end of the sub-module unit, the trainee should be able to:
 - a) describe result oriented management
 - b) describe result oriented agreement and SMART
 - c) describe the steps in result oriented management
 - d) compare Results Oriented Management with Value Based Management and Results Based Leadership
 - e) discuss performance contracts

- 29.3.10C Competence**
The trainee should have the ability to: manage business finances

- Content*
- 29.3.11T1 Description of result oriented management
 - 29.3.11T2 Description of result oriented agreement and SMART
 - i) Result oriented agreements
 - ii) SMART- Specific, Measurable, Acceptable, Relevant and Traceable
 - 29.3.11T3 Steps in result oriented management

Suggested teaching/Learning Activities

- Discussion
- Illustration
- Note taking
- Role play
- Industrial attachment
- Industrial visit

<ul style="list-style-type: none"> i) Setting long term goals ii) Translating long term goals into strategic business unit goals and individual goals iii) Obtaining result oriented agreements iv) Implementation v) Periodic appraisals, progress control and adjustments vi) Comparison 	<p>The trainee should have the ability to: focus on results at work places and in life</p>
<p>29.3.11T4 Results oriented management and value based management</p> <ul style="list-style-type: none"> - Results oriented management and results based leadership 	<p><i>Suggested teaching/Learning Activities</i></p> <ul style="list-style-type: none"> - Discussion - Note taking - Industrial attachment - Industrial visit <p><i>Suggested Teaching / Learning Resources</i></p> <ul style="list-style-type: none"> - A case study of performance contracts in the Kenyan situation.
<p>29.3.11T5 Performance contracts</p>	<p><i>Suggested Evaluation Methods</i></p> <ul style="list-style-type: none"> - Oral tests - Timed written tests - Assignments
<p>29.3.11C Competence</p>	