

BUILDING DEPARTMENT
ARCHITECTURAL AND BUILDING TECHNICIAN CERTIFICATE
FOR
ARCHITECTURAL DRAWING (ABTC)

This programme is planned to provide a sound background in draughting techniques for

- (a) Persons wishing to commence a career as a draughtsman.
- (b) Persons already employed and who wishes to further their education to assist towards future advancement.

FIRST YEAR

DETAILS OF COURSE

FIRST TERM

1. Drafting equipment and its use
2. Lettering
3. Basic Technical Drawing – Primarily geometric construction
4. Isometric and Oblique pictorial drawings
5. Freehand sketching
6. Light construction principles

SECOND TERM

1. Basic residential planning
2. Drafting expression
3. Typical Architectural details
4. Working drawings of a building constructed with timber

THIRD TERM

1. Presentation Drawing and Rendering
2. Lectures in Building Construction and assignment in working drawings for a building planned by each students

ARCHITECTURAL AND BUILDING TECHNOLOGY CERTIFICATE COURSE (A.B.T.C)

BUILDING MATHEMATICS

FIRST YEAR – FIRST TERM

1. Introduction to the Metric System
2. Duodecimals
3. Fractions
4. Mensuration
5. Calculation of F.B.M

SECOND TERM

1. Perimeters
2. Areas, Volumes – of all shapes
3. Logarithms
4. Indices

THIRD TERM

Introduction to Trigonometry. Simple Algebra. Revision of first and second term work

SYLLABUS FOR QUANTITY SURVEYING (A.B.T.C)

FIRST YEAR – FIRST TERM

1. Introduction of Course work.
2. Setting-down of dimensions
3. General rules for taking
4. Excavation and Foundation
5. Walling, blockwork and partitions

HORIZONTAL FLAT AND LEVEL WITH THE GROUND

1. A solid layer of concrete or brick in the ground, on which a building is built to give it a firm base.

ELEMENT – An element of something is part which combines with other to make a whole.

VERTICAL- Something that is vertical straight up and forms a 90° angle, the surface on which it stands.

SECOND TERM

1. Facebook
2. Floors
3. Roofs
4. Internal Finishing
5. Windows

THIRD TERM

1. Doors
2. Stairs
3. Fittings
4. Abstracting
5. Revision

ARCHITECTURE AND BUILDING TECHNICIAN CERTIFICATE COURSE (ABTC)

SYLLABUS FOR BUILDING MATHEMATICS

SECOND YEAR

FIRST TERM

1. Revision of first year work
2. Algebra
3. Simple equations and the problems involving them
4. Simultaneous Equations
5. Graphic Solutions

SECOND TERM

1. Measurement of angles in degrees
2. Transposition of ratios and tables
3. Right angled triangles
4. Solution of triangles
5. Mensuration

THIRD TERM

1. Logarithms
2. Area of surfaces
3. Simpsons rule
4. Prismoidal Formula
5. Ratio and Percentages
6. Revision

ARCHITECTURAL AND BUILDING TECHNICIAN CERTIFICATE COURSE

SYLLABUS FOR BUILDING CONSTRUCTION

SECOND YEAR

FIRST TERM

Stairs Principles and rules governing stair construction. Straight flight stair in timber. Shuttering to concrete stairs. Reinforcement in strings treads of concrete stairs. Simple handrails and balustrading.

Plumbing External work in gutters, rainwater pipe and plumber's work to roofs. Internal work in cold water services.

Drainage General principles of drainage. Ground and foundations conditions under pipes, drainage fittings, joints.

SECOND TERM

Finishings Wall and Ceiling board finishes. External and Internal painting. Plain glazing types of glass and putty.

Temporary Works Scaffolding, subsoil drainage, trial holds.

Foundations Excavation to basements, deep trenches, retaining walls, simple plain foundations, in situ concrete. Pile caps short bored piles. Building on sloping sites.

Walls Simple framed structures including timber. Composite walls. External wall finishes. Masonry walls.

Floors Double and framed timber floors for large spans. Consideration in floor thickness use of beams. Floor finishes in wood block and tiles (Various).

THIRD TERM

Stairs Dog legs and open newel stairs, balustrades, metal including fixing to concrete.

Fire Precautions Fire resisting construction and regulations, fire resistance of common building materials.

Doors Internal and External folding and sliding, ironmongery and fittings.

Drainage and Plumbing Domestic drainage systems, septic tanks, soil and waste plumbing, domestic fittings.

Building Services Electrical, ventilation and air conditioning revision.

ARCHITECTURE AND BUILDING TECHNICIAN CERTIFICATE COURSE

SYLLABUS FOR BUILDING CONSTRUCTION (A.B.T.C)

FIRST YEAR

First Term

Vegetable Top Soil: (Oversite) the amount to be taken off before building operations commences, type of top soils their uses after reduced levels.

Foundations: Consideration of building sites, strips foundations. Excavation and timbering to simple trenches in various types of soil in different types of weather ground beam foundations poured piles, simple reinforcement principles to ground beams.

Walls: Brickwork and Blockwork to straight lengths, intersections and an angles treatment to jambs, chills

And thresholds of openings, methods of spanning the heads of an opening by timber or reinforced concrete. Provision for services, simple reinforcement rules for reinforced concrete lintels. Damp-proof courses. Termites' protection and control, simple partition walls in various materials including timber.

SECOND TERM

Floors Solid ground floors (Concrete) Upper floors in timber concrete floor finishes. Trimming to openings in timber and concrete to suspended floors.

Roofs Simple and framed pitched roofs up to 30 feet span, trussed and purlin roofs, timber trusses. Eaves and ridge details, purlins, hips and valleys. But proofing, Flat roofs in concrete and timber.

Roof Coverings Corrugated sheeting in galvanized iron, aluminium and asbestos cement. Details of hip, valley, ridge and eaves finish to pitch roof. Metallic coverings to flat roofs, flashings and weathering. Drainage to roofs.

THIRD TERM

Doors External and Internal framed and flush doors, frames and linings door, furniture and fittings.

Windows Timber casement and frames, metal casement and frames, shutters and louvers.

Plastering to walls, materials, mixes and application, plaster board to walls and ceilings.

Revisions.

