COURSE CODE: **DQS1**	**COURSE TITLE : INTRODUCTION TO QUANTITY SURVEYING**	**L**	**T**	**P**	**C**
		45	**0**	**30**	**4**

COURSE OUTCOMES (On completion of the course, the students will be able to):

1) Explain Basic terms and importance of estimation.
2) Define the various components of the building.
3) Apply the skills to differentiate the components in the buildings.

COURSE CONTENTS

Theory (L):

Fundamentals - Introduction to estimation - Types of estimate- Necessity - Overview of specification - Detailed and Drawing - Method of measurements - Building materials - Constructional practices and safety.

Substructure - Carriage of materials - Earthwork - Block work - Concrete works - PCC and RCC works – Waterproofing.

Superstructure - Columns - Beams - Slabs - Reinforcements - Masonry - Building services – Finishing - General items of work in Building – Standard Units Principles of working out quantities for detailed and abstract estimates.

Practical (P):

1. **Software application** – Basic operation of computer - Word – Excel – Power point
2. **Drafting application** – Introduction to autocad – basic commands – Editing commands – Basic tools – Dimensions – layers - drafting of 2D building drawing – layout

TOTAL: 75 PERIODS

COURSE CODE: **DQS2**	**COURSE TITLE : PRELIMINARY ESTIMATES**	**L**	**T**	**P**	**C**
		45	**0**	**30**	**4**

COURSE OUTCOMES (On completion of the course, the students will be able to):

1) Explain Various types of approximate estimate.
2) Calculate the materials quantity of brick, cement and concrete works.
3) Estimate joinery details for doors and windows.

COURSE CONTENTS

Theory (L):

Definition- Purposes of approximate estimates - types - Methods for preparing approximate estimates & numerical based on methods - Various terms such as administrative approval - Technical sanction – Contingencies - Work charged establishments etc

Calculation of quantities of brick work - RCC – PCC – Plastering - white washing - colour washing and painting / varnishing for shops – rooms - residential building with flat and pitched roof – Various types of arches – Calculation of brick work and RCC works in arches – Estimate of joineries for panelled and glazed doors, windows, ventilators, handrails etc.

Practical (P):

1. **Approximate estimation -** Plinth area estimate - Cubic rate estimate - Estimate per unit base – Approximate estimate – Supplementary estimate
2. **Material calculation –** Cement – sand – aggregate – lime mortar- concrete for various grades – plastering - tiles
3. **Joinery details –** Panelled doors – windows – glass – painting – Ventilator - handrails

TOTAL: 75 PERIODS

COURSE CODE: **DQS3**	**COURSE TITLE : DETAILED ESTIMATES**	**L**	**T**	**P**	**C**
		45	**0**	**30**	**4**

COURSE OUTCOMES (On completion of the course, the students will be able to):

1) Explain importance of detailed estimation
2) Estimate the detailed quantity for RCC framed and load bearing structures.
3) Estimate the detailed quantity for water supply and road structures

COURSE CONTENTS

Theory (L):

Definition - purposes of detailed estimate - Data required for preparation of detailed estimate - Methods of taking out quantities- long wall- short wall method - Centre line method - Bar Bending Schedule & its necessity - preparation of bar bending schedule of various structural elements as per code IS2502 - Preparation of detailed estimate of R.C.C framed and load bearing structures.

Water supply and road work - Estimating of septic tank, soak pit – sanitary and water supply installations – water supply pipe line – sewer line – tube well – open well – estimate of bituminous and cement concrete roads – estimate of retaining walls – culverts.

Practical (P):

1. Preparation of detailed estimation for load bearing structure – Residential building – Framed structures.
2. Preparation of detailed estimation for load Sanitary and water supply system.
3. Preparation of detailed estimation for Road works.

TOTAL: 75 PERIODS

COURSE CODE: **DQS4**	COURSE TITLE : **MEASUREMENTS**	**L**	**T**	**P**	**C**
		45	**0**	**30**	**4**

COURSE OUTCOMES (On completion of the course, the students will be able to):

1) Apply the standard rules for measurement of various items of work and materials
2) Understand how to take off the quantities using different methods
3) Prepare BOQ and monitor the projects in terms of Quantities of resources and costing during its life cycle

COURSE CONTENTS

Theory (L): Units of measurement for various items of work and materials as per BIS:1200 - Degree of accuracy in measurements - Measurement Books- Deduction for openings in masonry/plastering/colour washing works- Painting Coefficients- Categories of Labourers- Material requirements for different items of works- Labour requirement for different items of works- Standard Data Book- Task or Out turn of labourers - Cost of materials and wages of labour- Schedule of Rates - Revision of rates- Market Rates- Lead- Cost of conveyance - Handling charges –Lump sum and Contingency provisions in Estimates - Different methods of taking off quantities – centre line method - long wall and short wall method

Practical (P):

1) Measurement book
2) Quantity take-off using different methods from CAD Drawings
3) Calculation of quantity of various items of works using MS Excel

TOTAL: 75 PERIODS

COURSE CODE: **DQS5**	COURSE TITLE : **QUANTITY CALCULATIONS**	**L**	**T**	**P**	**C**
		45	**0**	**30**	**4**

COURSE OUTCOMES (On completion of the course, the students will be able to):

1) Arrive the rates for different items of works
2) Analyse the rates for plastering and pointing
3) Calculate the quantity of steel required for various RCC elements

COURSE CONTENTS

Theory (L): Cement calculation - Cement mortars of different proportion - Cement concrete of different proportion – Brick and Stone masonry in cement mortar - Plastering and pointing - Painting and polishing - Cement concrete flooring - Terrazo flooring - Steel reinforcement of RCC elements - Beam, lintels, slab and column

Practical (P):
1) Material calculation using MS Excel

TOTAL: 75 PERIODS

COURSE	COURSE TITLE : **ANALYSIS OF RATES**	**L**	**T**	**P**	**C**

CODE: **DQS6**		**45**	**0**	**30**	**4**

COURSE OUTCOMES (On completion of the course, the students will be able to):

1) Familiarize the steps involved in the analysis of rates
2) Analyze the rates for different items of works
3) Prepare the cost of various materials and labour

COURSE CONTENTS

Theory (L): Steps involved in the analysis of rates. Requirement of material, labour, sundries, contractor's profit and overheads - Analysis of rates for finished items when data regarding labour, rates of material and labour is given: -
Earthwork in excavation hard/ordinary soil and filling with a concept of lead and lift - Cement concrete in foundation - RCC in roof slab - Brick masonry in cement mortar - Cement Plaster - Painting and polishing - Running and maintenance cost of construction equipment

Practical (P):
1) Prepare the rate analysis using MS Excel
2) Prepare the cost of material and labour using MS Excel

TOTAL: 75 PERIODS

COURSE CODE: **DQS7**	**COURSE TITLE : Measurement Book And Billing**	**L**	**T**	**P**	**C**
		45	**0**	**30**	**4**

COURSE OUTCOMES (On completion of the course, the students will be able to):

1) Explain the general rules involved in writing measurement book.
2) Summarize the steps involved in preparation of bill.
3) Enumerate different types of payment.

COURSE CONTENTS

Theory (L):

Entries in measurement book, standard measurement book, checking of measurement

Preparation of bill, first and final bill, running account bill, advance payment, secured advance payment, refund of security money

Practical (P):

Software application – Basic operation of computer - Word – Excel – Power point

TOTAL: 75 PERIODS

COURSE CODE: **DQS8**	**COURSE TITLE : VALUATION**	**L**	**T**	**P**	**C**
		45	**0**	**30**	**4**

COURSE OUTCOMES (On completion of the course, the students will be able to):

1) Summarize the purpose of valuation.
2) Explain the various methods of calculating depreciation.
3) Discuss the different methods of valuation.

COURSE CONTENTS

Theory (L):

Purpose of valuation, principles of valuation

Definition of various terms related to valuation – depreciation, sinking fund, salvage and scrap value, market value, fair rent, year's purchase etc

Methods of valuation - Replacement cost method - Rental return method

Practical (P):

Software application – Basic operation of computer - Word – Excel – Power point

COURSE CODE:	**COURSE TITLE : CONTRACTOR SHIP**	**L**	**T**	**P**	**C**
		45	**0**	**30**	**4**

DQS9

COURSE OUTCOMES (On completion of the course, the students will be able to):

1) Explain about basic concepts of Contracts
2) Define the types of contracts and drafting of contract document
3) To know the conditions on contract

COURSE CONTENTS

Theory (L):

Fundamentals - Introduction about Contract - Qualities of a good contractor and their qualifications

Types of contracts- formation of contract- contract conditions-contract problems -Contract for labor material - Design and construction - Drafting of contract documents - Construction contracts - Arbitration and legal requirements.

Types of tenders, scrutinizing of tender, Accepting Tenders, Notice-Inviting tender

Practical (P):

1. **Software application** – Basic operation of computer - Word – Excel – Power point
2. **Drafting application** – Introduction to autocad – basic commands – Editing commands – Basic tools – Dimensions – layers - drafting of 2D building drawing – layout

TOTAL: 75 PERIODS

COURSE CODE: **DQS10**	**COURSE TITLE : PREPARATION OF TENDER DOCUMENTS**	**L**	**T**	**P**	**C**
		45	**0**	**30**	**4**

COURSE OUTCOMES (On completion of the course, the students will be able to):

1) Explain about basic concepts of tender documents
2) Apply the knowledge on preparing the tender documents on each element of building
3) Create the tender notices and document for bidding purpose

COURSE CONTENTS

Theory (L):

Introduction - Tender notices and types – tender documents –drafting modern tenders

Exercises on preparing tender documents for the following /

a) Earth work

b) Construction of a small house as per given drawing

c) RCC works d) Pointing, plastering and flooring

e) White-washing, distempering and painting

f) Wood work including polishing g) Sanitary and water supply installations

h) False ceiling, aluminum (glazed) partitioning

i) Tile flooring including base course

Single and two cover-bids; tender, tender forms and documents, tender notice, submission of tender and deposit of earnest money, security deposit, retention money, maintenance period

Practical (P):

1. **Software application** – Basic operation of computer - Word – Excel – Power point
2. **Drafting application** – Introduction to autocad – basic commands – Editing commands – Basic tools – Dimensions – layers - drafting of 2D building drawing – layout

TOTAL: 75 PERIODS