



CTESCON

CHEMBUR TROMBAY EDUCATION SOCIETY'S

CTES

COLLEGE OF ARCHITECTURE

ESTD : 2014

MH - 77

UNAIDED

APPROVED BY COUNCIL OF ARCHITECTURE

AFFILIATED TO UNIVERSITY OF MUMBAI

N.G. Acharya Marg
Chembur, Mumbai 400071
Maharashtra
India



+91 7700024676



admin@ctescoa.ac.in



www.ctescoa.ac.in

NAME : _____



UNIVERSITY OF MUMBAI

**Syllabus for the Bachelor of Architecture
Program: B.Arch.**

**Third Year
Bachelor of Architecture
(Semester-V)**

**(As per Credit Based Semester and
Grading System with
effect from the academic year 2014–2015)**

Scheme of Teaching and Examinations

Bachelor of Architecture (B. Arch.) Semester V

	Semester V Exam conducted by individual colleges	Teaching Scheme		Credits		
Sub. No.	SUBJECTS	Lecture	Studio	Theory	Studio	Total
BARC 501	Architectural Design Studio 5		8		8	8
BARC 502	Allied Design Studio 5		3		3	3
BARC 503	Architectural Building Construction 5	3	3 classes of technology studio	3	1	4
BARC 504	Theory & Design of Structures 5	2		2	1	3
BARC 508	Architectural Building Services 3	2		2	1	3
BARC 505	Humanities 5	3		3		3
BARC 507	Architectural Representation & Detailing 5	2	2	2	2	4
BARC 509	Architectural Theory 3	2		2		2
BARP 520	College projects 5		3		3	3
BARE 521	Elective 5		3		3	3
	Total	14	22	14	22	36

	Semester V Exam Exam conducted by individual colleges	Examination Scheme			
Sub. No.	SUBJECTS	Theor y (paper)	Internal	External viva	Total
BARC 501	Architectural Design Studio 5		100	100	200
BARC 502	Allied Design Studio 5		100		100
BARC 503	Architectural Building Construction 5	50	50		100
BARC 504	Theory & Design of Structures 5	50	50		100
BARC 508	Architectural Building Services 3	50	50		100
BARC 505	Humanities 5	50	50		100
BARC 507	Architectural Representation & Detailing 5		100		100
BARC 509	Architectural Theory 3		50		50
BARP 520	College projects 5		100		100
BARE 521	Elective 5		100		100
	Total	200	750	100	1050

Syllabus (Course Content) for Third year B. Arch. Course Semester V

501 Achitectural Design Studio 5

Credits-8

Teaching Hours

Lectures- -----

Studio- 144 periods of 50 minutes duration -120 hours

Sessional marks-

Internal- 100

External ---100

Course Objectives

- To understand the potential of urban land and optimization of spaces
- To understand architectural forms, and corresponding functions for different types of buildings.

Expected Course out come

Architecture for urban commercial, recreation, entertainment activities for large group of people with respect to following

- Development of appropriate architectural forms, their grouping and composition,
- Provision of spaces required for various activities.
- Provision of spaces for required infrastructure and services

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502 Allied Design Studio 5

Credits-3

Teaching Hours

Lectures

Studio- 54 periods of 50 minutes duration – 45 hours

Sessional marks-

Internal- 100

External -----

The course content will be developed by the individual colleges as per their choice of Allied Design scheme.

Credits-3

503 Architectural Building construction 5

Credits-4

Teaching Hours-

Lectures-54 periods of 50 minutes duration- 45 hours

Studio- 54 periods of 50 minutes duration- 45 hours to be conducted as technology studio (out of which 15 hours are considered for credit calculations)

Scheme of examination

Theory: one paper of three hours duration Max. marks- 50 Min marks for passing- 20

Sessional marks-

Internal- 50 marks

External ----

Building Skin in various light weight materials.

: Building Skin in various lightweight materials for Framed Structure

- Curtain walls with transoms, mullions and infilling panels of various materials
- Suspended glazing
- Composite panel cladding to the existing structure

Canopies in various materials.**Foundation Systems**

Types of foundation systems,

Shallow foundations

Concept of Buoyant Foundation

Spread Foundation, its need and application

Raft Foundations of various types viz. Slab, Slab & Beam, and Cellular type

Foundation Walls

Column footings- Strip, Combined, and Cantilevered footings

Sessional work based upon above in the form of case studies, site visits, sketches, Drawings.

504 Theory and Design of structures 5**Credits 3****Teaching Hours**

Lectures- 36 periods of 50 minutes duration- 30 hours

Studio- 54 periods of 50 minutes duration- 45 hours

(to be conducted as technology studio out of which 15hours are considered for credit calculations)

Scheme of examination

Theory -one paper of two hours duration Max. marks- 50 Min marks for passing- 20

Sessional marks-

Internal- 50

External ----

Theme- Structural steel design of primary elements

1. Understanding steel table and readily available steel sections in market.
2. Understanding connections
Riveted , welded, and bolted for steel framed building, trusses etc
3. Design of tension members in trusses
4. Design compression members in trusses and columns
5. Design of beams
6. Design of foundations, slab base, gusseted base and grillage

Sessional work based upon above .

505 Humanities 5**Credits 3****Teaching Hours**

Lectures- 54 periods of 50 minutes duration – 45 hours

Studio- -----

Scheme of examination

Theory -one paper of two hours duration Max. marks- 50 Min marks for passing- 20

Sessional marks-

Internal- 50

External -

Theme- Art and Architecture

Modern movements in art and architecture

Between the wars

After the wars

Architectural evolution influenced by developments in technology and structural systems

Postmodern (and late-modern) movements in art and architecture

Critical and philosophical influences on architecture after the 1980s

Critical regionalism

Deconstruction

Architectural and art trends in the first decade of the millennium

Art and architecture in India since independence

Modernism

Architecture for the State

Influence of Le Corbusier and Kahn

Indian modernists

The influence of Vistara and the validation of the vernacular
Critical regionalism

Architectural and art trends in the first decade of the millennium in India

507 Architectural Representation and detailing

Credits- 4

Teaching Hours

Lectures- 36 periods of 50 minutes duration-30 hours

Studio- 36 periods of 50 minutes duration – 30hours

Sessional marks-

Internal- 100

External ----

Theme-A.Quantity Surveying and Estimating
B.Specifications

Introduction:-Definition, Aim and object, Scope and importance of subject.

Types of Estimates- Approximate and Detailed.

Methods of Approximate Estimating – Built up or Carpet Area Method, Cubic Contents, Method and Numbers System, Current Rates in Bombay for Approximate Estimating.

Detailed Estimate on item rate basis- Quantities and Abstract of Estimate, Bill of Quantities of a Tender, Contingencies.

Rates for Civil work items- as per Municipal or P.W.D. Schedule Rates and Current market rates in Bombay, Units for rates.

Taking out quantities for civil works of Load Bearing structures and preparation of Abstract.

Taking out quantities for civil works of Load Bearing structures and preparation of Abstract.

Sessional Work based upon above topics.

B. Specifications

Importance of specification in the construction activities

Methods of drafting specifications with correct order and sequence

Types of specifications-detailed and brief, open and restricted, performance, and standard (Indian standard Specifications and P.W.D. specifications)

Language of specifications

Organization of project specifications

Sessional work

Brief specification of a building project

508 Architectural Building services 3

Credits 3

Teaching Hours

Lectures- 36 periods of 50 minutes duration- 30 hours

Studio- 54 periods of 50 minutes duration- 45 hours

(to be conducted as technology studio out of which 15hours are considered for credit calculations)

Scheme of examination

Theory: one paper of two hours duration Max. marks- 50 Min marks for passing- 20

Sessional marks-

Internal- 50 marks

External ----

Electricity

Lighting

Acoustics

Electrical services:

Basic concept of electricity: direct and alternating currents

Three phase and single phase supply

Electrical supply to sites and distribution to buildings

Electrical distribution within buildings

Electrical layouts for interior spaces

Open and concealed wiring

Types of wires

Wiring accessories

Concepts of electrical safety- Earthing, MCB, elcb, lightning conductor

Artificial lighting

Direct and indirect lighting

Types of lamps

Illumination levels

Acoustics-

concept and terminology

Room Acoustics

Propagation and reverberation of sound

Acoustics for lecture halls and Auditoriums

Sessional work based upon above.

509Architectural theories 3

Credits- 2

Teaching Hours

Lectures- 36 periods of 50 minutes duration – 30 hours

Studio- -----

Sessional marks-

Internal- 50 marks

External ---

RESEARCH AND CRITICISM

Objectives:

1. To understand the fundamentals of theoretical architectural research, its objectives and its essential methodologies.
2. To be able to build up from documentation and data collection to critical analysis and evaluation. Bloom's Taxonomy may be used by teachers to convey the various levels in research and evaluation to students.
3. To develop an attitude of Critical Thinking (reflective reasoning about beliefs and actions and ways of deciding whether a claim is always true, sometimes true, partly true, or false, from Robert Ennis) and its essential dimensions: the analysis, assessment, dispositions, skills and abilities and obstacles or barriers to critical thought (from criticalthinking.org)

Sessional Work: This semester small projects of research and reflective writing shall be undertaken by students to develop personal skills of research presentation and critical evaluation (using previously gained knowledge of referencing and citation). Students should be encouraged also to write pieces that are argumentative, and disputational to be able to convey with clarity and effectiveness alternative and individualistic thinking about architecture.

520 college projects 5

Teaching Hours-

54 periods of 50 minutes duration – 45 hours

Sessional marks-

Internal- 100

External -----

(to be developed by individual colleges)

The following is a representative list of what may constitute college projects:

Research and documentation, Seminars, Guest Lectures, putting up Exhibitions, Workshops, participating in Architectural Competitions or conducting Site Visits or Study Tours.

521 electives 5

Credits- 3

Teaching Hours

Studio- 54 periods of 50 minutes duration – 45 hours

Sessional marks-

Internal- 100

External -----

(to be developed by individual colleges)

Technology Studio

Credit and marks as per the scheme of examination for individual courses

Teaching Hours

Studio- 54 periods of 50 minutes duration – 45 hour

Objectives

Integration of courses

Combined studio time

Technology studio is the studio time for students where guidance for technical courses will be available.

Combined Studio classes to be used for Sessional work for individual courses as well as for integration of courses

**DETAILS OF SCHEME OF EXAMINATION
TO BE CONDUCTED BY COLLEGES.**

BACHELOR OF ARCHITECTURE: SEMESTER V

	Semester V EXAMINATION Exam conducted by individual colleges	THEORY				SESSIONAL MARKS				
						INTERNAL		EXTERNAL		
SUB. NO.	COURSES	No of Papers	Duration	Max Marks	Min Marks for Passing	Max Marks	Min Marks for Passing	Max Marks	Min Marks for Passing	Max Marks for the Course
BARC 501	Architectural Design 5	---	----	---	---	100	50	100	50	200
BARC 502	Allied Design 5	----	---	---	---	100	50	---	----	100
BARC 503	Architectural Building Construction 5	1	3 HOURS	50	20	50	25	---	---	100
BARC 504	Theory and Design of Structures 5	1	2HOURS	50	20	50	25	---	---	100
BARC 505	Humanities 5	1	2HOURS	50	20	50	25	---	---	100
BARC 507	Architectural Representation & Detailing 5	---	---	---	---	100	50	---	---	100
BARC 508	Architectural Building Services 3	1	2HOURS	50	20	50	25	----	----	100
BARC 509	Architectural Theory 3	---	---	---	---	50	25	---	---	50
BARP 520	College projects 5	---	---	---	---	100	50	---	---	100
BARE 521	Elective 5	---	---	---	---	100	50	---	---	100
	Total marks for the examination									1050

Notes: Theory, Internal sessional work, and External viva are considered as separate heads of passing

Total marks for the examination = 1050

Minimum marks for passing the examination= 525