



CTESCOA

CHEMBUR TROMBAY EDUCATION SOCIETY'S

CTES

COLLEGE OF ARCHITECTURE

ESTD : 2014

MH - 77

UNAIDED

APPROVED BY COUNCIL OF ARCHITECTURE

AFFILIATED TO UNIVERSITY OF MUMBAI

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UNIVERSITY OF MUMBAI

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

**Second Year
Bachelor of Architecture
(Semester-III)**

**(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 III

	Semester III Exam conducted by individual colleges	Teaching Scheme		Credits		
Sub No.	SUBJECTS	Lecture	Studio	Theo ry	Studio	Total
301	Architectural Design Studio		6		6	6
302	Allied Design Studio		3		3	3
303	Architectural Building Construction	3	3 classes Technology studio	3	1	4
304	Theory and Design of Structures	2		2	1	3
308	Architectural Building Services	2		2	1	3
305	Humanities	3		3		3
306	Environmental Studies	2		2		2
307	Architectural Representation & Detailing	2	2	2	2	4
309	Architectural Theory	2				2
320	College projects		3			3
321	Elective		3			3
	Total	16	20	16	20	36

	Semester I II Exam Exam conducted by individual colleges	Examination Scheme			
Sub. No.	SUBJECTS	Theory (paper)	Internal	External viva	Total
301	Architectural Design Studio		100	100	200
302	Allied Design Studio		100		100
303	Architectural Building Construction	50	50		100
304	Theory and Design of Structures	50	50		100
308	Architectural Building Services	50	50		100
305	Humanities	50	50		100
306	Environmental Studies		50		50
307	Architectural Representation & Detailing		100		100
309	Architectural Theory		50		50
320	College projects		100		100
320	Elective		100		100
	Total				1100

Syllabus (Course Content) for Second Year B. Arch. Semester III

301 Architectural Design Studio 3

Credits-6

Teaching Hours

Lectures- -----

Studio- 108 periods of 50 minutes duration -90 hours

Sessional marks-

Internal- 100

External ---100

Objectives:

Understanding space requirements for various activities for small groups of people

Understanding indoor and out door spaces created by built forms.

Design Objectives

Design of spaces suitable for the intended activity

Design of spaces as per the behavioral needs of individuals and groups.

Design and detailing of built form and required infrastructure with reference to methods of construction, and materials

Design projects

Built and Un-built spaces for multiple activities for a small group of people

Built and Un built spaces for relatively larger groups.

302 Allied Design Studio 3

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.

303 Architectural Building Construction & Materials 3

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 ----

Objectives-

Understanding concepts of framed structures in R.C.C.

Understanding methods of construction of various components of R.C.C. Structures

1. Structural framing in R.C.C for low rise buildings.
- 2 Foundation Systems, Floor Systems, Wall Systems, staircases, Roof Systems,
3. Moisture and Thermal protection in R.C.C. framed low rise buildings.
4. Movable light weight partitioning and paneling, Stairs in Interior spaces.

Sessional Work : based upon above in form of sketches, drawings, Case Studies, Reports.

Application to Architectural Design Projects.

304 Theory & Design of Structures 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

External ----

Objectives:

Understanding of basic theories and principles of structural analysis

Understanding of properties of materials relevant to structural analysis

Understanding of behavior of structural elements under various conditions

1. Theory of simple bending

- a. Theory of simple bending only equations & problem.
- b. Design of timber & steel beams.
- c. Shear stress distribution.

2. Deflection

- a. Simply supported beams and cantilevers with distributed & point loads by Euler's theory.
- b. Introduction to Macaulay's method
- c. Application of deflection in structural planning

3. Direct AND Bending Stresses

- a. Combined stress distribution for Beam, column and footing
- b. Application to design the footing of wall and column (only plan dimension)

4. Basics of RCC

Grades of concrete and steel used in RCC.

Application of thumb rules for selecting dimensions of slab, beam and column for low rise and low span structures. Placement of steel based of Bending moment and shear force diagrams

5. Material testing**Cement(OPC)**

Initial and final setting time

Consistency

Fineness

Compressive strength

Sand

Bulking, silt content, Fineness modulus

Bricks

Density, Water absorption, compressive strength

305 Humanities 3

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 ----

The study of the socio-cultural circumstances, the art and the architecture of the following:

The decline of the Roman Empire

The beginnings of Christianity and the formation of the Holy Roman Empire

Early Christian architecture

The Byzantine age

The Romanesque age

Medieval Europe

The Gothic age

The rise of Islam and its impact on Europe

The Crusades and their aftermath; the fall of Constantinople

The Renaissance in Italy

The rediscovery of the Classical past and its impact on art, architecture, science and philosophy

Humanism

The Masters of the Renaissance

Mannerism

The Renaissance in the rest of Europe

The Reformation, its impact on art and architecture

The Counter-Reformation

Baroque art and architecture

The age of discovery

Colonization and the changed world order

The Enlightenment

The age of revolution: America and France

The Industrial Revolution

Its rise in England

Demographic change and urbanization

New materials and technologies and their impact

New building types for the industrial age
The battle of 'styles'; nostalgia and exoticism
Neo-Classical and Neo-Gothic architecture

The Arts and Crafts Movements in Europe
Art Nouveau
Art Deco
Early modernistic impulses
Modern movements in art
Modern movements in architecture

306 Environmental Studies

Credits-2

Teaching Hours

Lectures- 36 periods of 50 minutes duration-30 hours

Sessional marks-

Internal- 50

External ----

Objective: To study and understand passive methods of environmental control

Climatology and Building Sciences

Micro climate and Macro climate
Energy flow in building
Human comfort
Traditional methods for achieving comfort

Passive Methods of control

Natural lighting
Solar Radiations and Architecture
Air flow patterns inside buildings and in building layouts
Natural ventilation

307 Architectural Representation & Detailing 3

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 ----

Perspective-

Perspective of building elements
Perspective of interior spaces

Sciography-

Shades and shadows of buildings and parts of buildings

Sessional work – Perspective and Sciography exercises

Documentation and measured drawings

Methods of measurement of interior and exterior spaces, Building Elements.

Sessional work –

Architectural plans, sections, elevation of existing building/ interior space as per the measurements.

308 Architectural Building Services 1

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 15 hours are considered for credit calculation)

Scheme of examination

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

Sessional marks-

Internal- 50

External ----

Objectives: understanding basic services required for a building and interior spaces

Sanitation:

Sanitary appliances and user space requirement

Various types of traps used with appliances

Design of toilets

Drainage and water supply connections to various appliances

Systems of building drainage

Water supply

Direct and indirect water supply for buildings

Connection from Municipal water main- Ferrule, water meter.

Design of water storage tanks, and down take pipes

Taps and valves used with various appliances

Sessional work_

Market survey for appliances and accessories,

Water supply calculations

Water supply layout- connection from municipal main to buildings

Water supply connections within the building

Design of toilets with water supply and drainage connections

309 Architectural Theory 1

Credits- 2

Teaching Hours

Lectures- 36 periods of 50 minutes duration – 30 hours

Studio- -----

Sessional marks-

Internal- 50 marks

External ---

READING

Objectives:

1. To understand and comprehend ideas in architecture through writings in architecture
2. To appreciate architecture as the development of changing ideas over time, and as the representation of their particular time and context. To be able to chart the change of ideas chronologically over time.
3. To become familiar with and improve comprehension about architecture using theoretical texts and architectural criticism.

Sessional Work:

Students are expected to read from short and long writings about architecture and communicate their comprehension in writing and discussions/presentation in class. It is suggested that texts from the following authors be used to build up a body of knowledge about architecture (this is only a representative list):

Vitruvius, Andrea Palladio, John Ruskin, Louis Sullivan, Adolf Loos, Le Corbusier, writings from the Bauhaus, Peter Blake, Philip Johnson, Charles Jencks, Robert Venturi, Adrian Forty, Christopher Alexander, Leon Krier, Kevin Lynch, Rem Koolhaas, Bjark Engels, Charles Correa, Romi Khosla,

320 College Projects 3

Credits- 3

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:

Seminars, Tutorials/ additional classes for any course, Guest Lectures, putting up Exhibitions, Workshops, participating in Architectural Competitions or conducting Site Visits or Study Tours.

321 Elective 3

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 SEMESTER III
TO BE CONDUCTED BY COLLEGES.

BACHELOR OF ARCHITECTURE SEMESTER III DETAILS OF SCHEME OF EXAMINATION										
SR NO	Semester III EXAMINATION Exam conducted by individual colleges	THEORY				SESSIONAL MARKS				
		No of papers	duration	Max. marks	Min. Marks for passing	Internal Max. marks	Min. Marks for passing	External Max Marks	Min. Marks For passing	Max. marks for the course
301	Architectural Design 3	---	----	---	---	100	50	100	50	200
302	Allied Design 3	----	---	---	---	100	50	---	----	100
303	Architectural Building Construction 3	1	3 HOURS	50	20	50	25	---	---	100
304	Theories and Design of Structures 3	1	2 HOURS	50	20	50	25	---	---	100
305	Humanities 3	1	2 HOURS	50	20	50	25	---	---	100
306	Environmental Studies 3	---	---	---	---	50	25	---	---	50
307	Architectural Representation & Detailing 1	---	---	---	---	100	50	---	---	100
308	Architectural Building Services1	1	2 HOURS	50	20	50	25	----	----	100
309	Architectural Theories 1	---	---	---	---	50	25	---	---	50
320	College projects 3	---	---	---	---	100	50	---	---	100
321	Elective 3	---	---	---	---	100	50	---	---	100
Total marks for the examination										1100

Total marks for the examination = 1100

Minimum marks for passing the examination= 550