CHEMBUR TROMBAY EDUCATION SOCIETY'S
C T E S
COLLEGE OF ARCHITECTURE
CTESCOA
ESTD : 2014 MH – 77 UNAIDED
APPROVED BY COUNCIL OF ARCHITECTURE AFFILIATED TO UNIVERSITY OF MUMBAI

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NAME : _____

UNIVERSITY OF MUMBAI

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

Fourth Year
Bachelor of Architecture

(Semester-VII)

(As per Credit Based Semester and
Grading System with
effect **from the academic year 2015–2016**)

Scheme of Teaching and Examinations
Bachelor of Architecture (B. Arch.)

Semester VII

	Semester VII Exam conducted by college	Teaching Scheme		Credits		
Sub. No.	COURSES	Lecture	Studio	Theory	Studio	Total
BARC 701	Architectural Design Studio 7		8		8	8
BARC 702	Allied Design 7	2	2	2	2	4
BARC 703	Architectural Building Construction 7	3	3 classes of technology studio	3	1	4
BARC 704	Theory and Design of Structures 7	2		2	1	3
BARC 708	Architectural Building Services 5	2		2	1	3
BARC 707	Architectural Representation & Detailing 7	2	3	2	3	5
BARC 710	Professional Practice 1	3		3		3
BARP 720	College projects 7		3		3	3
BARE 721	Elective 7		3		3	3
	Total	14	22	14	22	36

	Semester V II Exam conducted by college	Examination Scheme			
Sub. No.	COURSES	Theory (paper)	Internal	External viva	Total
BARC 701	Architectural Design Studio 7		100	100	200
BARC 702	Allied Design 7		100		100
BARC 703	Architectural Building Construction 7	50	50		100
BARC 704	Theory and Design of Structures 7		100		100
BARC 708	Architectural Building Services 5	50	50		100
BARC 707	Architectural Representation & Detailing 7		100	100	200
BARC 710	Professional Practice 1	50	50		100
BARP 720	College projects 7		100		100
BARE 721	Elective 7		100		100
	Total	150	750	200	1100

Syllabus (Course Content) for Fourth Year B. Arch.
Semester VII

701 Achitectural Design Studio 7

Credits-8

Teaching Hours

Lectures- --------
Studio- 144 periods of 50 minutes duration -120 hours

Sessional marks-

Internal- 100 External ---100

Theme- Housing

Course Objectives

- Understanding typologies of housing in Urban Areas.
- Understanding quantitative and qualitative aspects of mass housing.
- Under standing user aspirations and user affordability

Expected Course out come

Design of housing schemes in urban area, along with necessary infrastructure, services, and amenities.

702 Allied Design

Credits-4

Teaching Hours

Lectures 36 periods of 50 minutes duration – 30 hours
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.
Suggested Themes: town planning, Urban Design, Housing

703 Architectural Building construction 7
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 ----

Basement and Deep Foundations:

Single and multi level basements for Parking and Services.
Deep foundations using Piles.

Introduction to High rise buildings:

High rise buildings in RCC and Steel frame of varying structures
The construction process of high rise buildings

Introduction Earthquake Resistant Construction:

Earthquake resistant construction for Load bearing and Framed structures

704 Theory and Design of structures 7
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 ---
Sessional marks-
Internal- 100 External ----

1.introduction to design of deep foundation
It is to be taught with an emphasis on their suitability with respect to different types of buildins and soil conditions and structural drawings (no calculation)

2.combined footings
1 rectangular footing
2 trapezoidal footing
3 strip footing
4 raft footing

3.piles footings
Pre cast and cast in situ piles and pile caps

4. Retaining walls

5.earth quake resistant structure

6. Theory and principles of structural design of tall buildings.

707 Architectural Representation and detailing 7
Credits 5
Teaching Hours
Lectures- 36 periods of 50 minutes duration-30 hours
Studio- 54periods of 50 minutes duration – 45hours

Sessional marks-
Internal- 100 External ----
Theme – Project Specifications
Building By laws and Approval Drawings

Project specifications
Detailed specifications of various work items for a structure from exacavation up to finishing in super structure.

1.Excavation- filling, timbering, trenches
2.Brick Masonry-
3. Stone Masonary
4.specification for R.C.C. work including mixing, placing, curing of concrete
5. Specifications for Fabrication and assembly of structural steel frame buildings
6. Rendering and plastering
7.Floor finishes
8.wall finishes
9. flooring cast in situ including I.P.S., Terrazo
10. Roof finishes in tiles and roofing sheets

Sessional work – Project specification for a building to include above items.
Building by laws and Approval Drawings
- Introduction to Building bye laws and regulations- their need and relevance
- Study of National Building Code
- Implications of Development control rules for greater Mumbai as approved by Government of Maharashtra on contemporary growth of built environment of Mumbai.
- Calculations of built up area and F.S.I.
- Comprehensive study of Building Bye laws relating to the strength and stability of structures, bye-laws relating to light and ventilation, and sanitation of buildings.
- Various drawings required for approvals from Authorities, on the basis of by Development Control rules and by laws

Sessional work – Set of approval Drawings and reports.

708 Architectural Building services 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 marks External ----

Theme- Heating, Ventilation, and Air conditioning

Comfort conditions- temperature control, Humidity control, air filtration, and air changes.

Heating of spaces- local and central heating- heating equipment
Thermal conductivity, and insulation.

Ventilation-
Mechanical ventilation in buildings-
Mechanical Ventilation in Basements
Fans, blowers, air filters
Air conditioning
Concept of refrigeration cycle, and air cycle
Systems of air conditioning- local and central
Duct work and air conditioning layouts
Fittings and fixtures

Sessional work

Case studies, market surveys, and drawings, based upon above.

710 Professional Practice 1

Credits- 3
Teaching Hours

Lectures- 54 periods of 50 minutes duration – 45hours
Studio- -----

Scheme of examination

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

Sessional marks-

Internal- 50 marks External ----

- **Introduction to Architectural profession**,
- Role of professional bodies

- Architect's Registration Act 1972
- The professional role, responsibilities, duties, liabilities of Architects
- Code of professional conduct
- Code relation to Architectural competition
- Copy-rights of drawings

Office

Office structures – Small practice, medium practice & Large practice.
Nature of partnership, registration of firm and dissolution

Office set up and administration

Task allocation – Work plans, monitoring the plans, review meetings, record keeping - – Inward, Phone calls, Minutes of meeting, To do list, wish list-Time Management

Tenders

Types of tenders and tender document,
World Bank formats, Indian Banks Association guidelines, PWD, CPWD, Tender forms
Tender draft notices and inviting of tenders
Procedure for opening and selection of tenders
Qualification criteria, Bid capacity, freak rates, rate analysis..
Analysis and report to owner
Work order

Contract

Types of contracts and contract documents
Detailed knowledge about various conditions of contract as published by Indian Institute of Architects and specially about
Earnest Money
Security Deposit
Retention Money
Mobilization Fund
Bank Guarantee
Architect's Instructions
Clerk of works
Variation and Extras
Defects after completion
Certificate and Payments
Insurance and fire insurance
Liquidate damage
Termination of Contract

720 college projects 7

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.

721 electives 7

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

Credits 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 VII

	Semester VII 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 701	Architectural Design 7	---	----	---	---	100	50	100	50	200
BARC 702	Allied Design 7	----	---	---	---	100	50	---	----	100
BARC 703	Architectural Building Construction 7	1	3 HOURS	50	20	50	25	---	---	100
BARC 704	Theory and Design of Structures 7	----	---	---	---	100	50	---	----	100
BARC 707	Architectural Representation & Detailing 7	---	----	---	---	100	50	100	50	200
BARC 708	Architectural Building Services 5	1	2HOURS	50	20	50	25	----	----	100
BARC 710	Professional Practice 1	1	2HOURS	50	20	50	25	----	----	100
BARP 720	College projects 7	---	---	---	---	100	50	---	---	100
BARE 721	Elective 7	---	---	---	---	100	50	---	---	100
	Total marks for the examination									**1100**

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

Total marks for the examination = 1100

Minimum marks for passing the examination= 550