

Dr. Babasaheb Ambedkar Marathwada University

**REVISED SYLLABUS
(ACADEMIC YEAR: 2010-11)**

FIFTH YEAR ARCHITECTURE

**(Faculty of Engineering)
Department of Architecture**

DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY

CIRCULAR NO. ACAD/SU/Engg./B.Arch./98/2014

It is hereby informed to all concerned that, the syllabus prepared by the Ad-hoc Board in Architecture and recommended by the Faculty of Engineering and Technology, the Academic Council at its meeting held on 08-07-2014 has accepted the **“Revised Syllabus of B.Architecture Fifth Year”** as appended herewith.

This is effective from the Academic Year 2014-2015 and onwards.

All concerned are requested to note the contents of this circular and bring the notice to the students, teachers and staff for their information and necessary action.

University Campus,
Aurangabad-431 004.
REF.NO. ACAD/ SU/ B.ARCH./
SYLLAB./2014/16676-82

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A.C.S.A. I.No.447[03].

Date:- 13-08-2014.


Director,
Board of College and
University Development.

Copy forwarded with compliments to :-

- 1] The Principals, affiliated concerned Colleges,
Dr. Babasaheb Ambedkar Marathwada University.
- 2] The Director, University Network & Information Centre, UNIC, with
a request to upload the above syllabus on University Website.

Copy to :-

- 1] The Controller of Examinations,
- 2] The Superintendent, [Engineering Unit],
- 3] The Superintendent, [Eligibility Unit],
- 4] The Director, [E-Suvidha Kendra], in-front of Registrar's Quarter,
Dr. Babasaheb Ambedkar Marathwada University,
- 5] The Record Keeper,
Dr. Babasaheb Ambedkar Marathwada University.

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SEMESTER- IX

Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

Syllabus for Fifth Year Arch. Course (Part I)

Teaching Scheme					Examination Scheme				
Code No.	Subject	Lecture Hours	Studio Hours	Total	Term Work	Pract Exam.	Theory Exam.	Total Marks	Duration
511	Professional Training - II	16 Weeks			--	250	--	250	

Note:

The student has the choice to either do professional training II with the same Architectural firm under which he/she did professional training I, or to do it with another firm. However, no item submitted for viva exam 421 shall be submitted for the corresponding exam in 511.

SEMESTER- X

Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

Syllabus for Fifth Year Arch. Course (Part II)

Teaching Scheme					Examination Scheme				
Code No.	Subject	Lecture Hours	Studio Hours	Total	Term Work	Pract Exam.	Theory Exam.	Total Marks	Duration
521	Dissertation & Thesis	--	16	16	100	200	--	300	--
522	Professional Practice - II	04	--	04	--	--	100	100	3 hours
523	Elective - I	02	--	02	50	--	--	50	--
524	Elective - II	02	--	02	50	--	--	50	--
		08	16	24	200	200	100	500	--

Note: Each Lecture / Studio Hour is of **50** minutes duration.

Subject code no:-521

DISSERTATION

Theory Hours:-Nil

Term Work:-100 Marks

Studio Hours:-16

Practical Exam:-200 Marks

Total:-16 Per Week

Theory Exam:-Nil

Dissertation is seen as a culmination of the development of the student knowledge attitude and skills over the course of studies of Architecture.

Students are expected to develop of his/her choice of subject and to demonstrate his/her ability to use effectively the tools of independent investigation and judgment to evolve design culture. The application these may be original design of research oriented work. Student shall choose a subject related to Architecture only, by considering following aspects:

Data collection and Analysis.

User's requirement and justification.

Socio-Economic issues.

Climatic Considerations/Environmental issues.

Selection of Site.

Method of Construction/Advance Technology,etc.

Integrated building Services.

Constructional technologies/Structural systems.

Landscape and Town planning.

At the end of the semester, each student is expected to submit all original drawings prepared as per the specifications of the department. Three copies of the report in the specified format along with the model submitted to the Department, after obtaining the approval of the respective guides.

The university shall schedule the final Viva-Voce at its convenience only after the receipt of the thesis submission by students. The performance sheet submitted by the department. Thesis committee should be the basis for allowing student to appear for the final Viva Voce.

For the end exams, Viva Voce will be conducted by jury comprising of Two external examiners and,Head of the department of the respective colleges will be internal examiner.

For the final viva voce **40%** internal marks will be alloted by respective guides/HODs of the colleges/Department and **60%** will be external marks out of the total of 200 marks.

Subject code no: -522

PROFESSIONAL PRACTICE II (REV)

Lecture hrs no:-04

Term work:-Nil.

Studio hrs no:-Nil

Practical Exam:-Nil

Total hrs:-04 Per week

Theory Exam:-100 marks.

AIM: - To Expose the students to advance issues concerning architectural practice such as Valuation of Immovable properties, Acquisition, Arbitration, Standard rent etc.

OBJECTIVES:-

◆ To further the students understanding of Professional practice and knowledge of advance issues in the profession.

☒ To explore the students on some of the important issues like Arbitration, Land acquisition, Easements etc.

UNIT I:- VALUATION.

Definition-Is it art or science -Examples from every day life.

Cost, Price & Value-Essential characteristics of Value-classification of Value.

Market Value and its characteristics.

UNIT II:- PURPOSE OF VALUATION.

Income tax, Wealth tax, Acquisition of property, Mortgage of property, Loans from bank and other institutions.

UNIT III:- METHODS OF VALUATION.

A) Land and Building method.

B) Rental Method.

A) Land and Building method.:-

(i) Situation, locality, area, shape, Ratio of frontage to depth, Return frontage Encumbrances.

Deprecations-straight line method.

(ii) Belting method of Valuation of land.

(iii) Leasehold Lands-Tenure

Free hold and Lease hold Tenures, Types of Leases.

B) Rental Method:-

i) Gross rent and net rent- Capitalised Value-Years Purchase, Outgoings-Repairs,

NA- Assessments, Annuity.

ii) Sinking fund, Physical & Economic life of Buildings Revisionary Value of Land.

Examples to be solved for Valuation.

Unit-IV ARBITRATION

Introduction, Mediation and conciliation:-

Arbitration:- Arbitration clause in contract. Advantages
Arbitration, Arbitrator, Appointment, Qualification.

Powers and Duties:-Terms and condition of Arbitration agreement.

Arbitral Award, Reasoned and Unreasoned award- Scott's Schedule.

Conduct of Arbitration Proceedings.

Excepted matters- Development-Legal position.

Unit-V LAND ACQUATION

Introduction, Basic principles of land Acquation Act. Investigation-objections and confirmation.

Claim and Award.

Unit-VI STANDARD RENT

Rent control act, Standard rent, Methods of Ascertaining standard. Theory of comparables,
Standard rent by investment theory.

Period of first Letting, Apportioned Area of Land.

Architect as an expert witness.

Calculation of standard rent.

Unit-VII EASEMENT

Meaning, Dominant and Servient heritage. Characteristics of easement.

Natural rights –Customary rights.

Continuous and discontinuous easements. Methods of acquiring Easement.

Essential conditions of enjoyment of easements. Easement of supports and drainage.

ELECTIVE-I

VERNACULAR ARCHITECTURE

Subject code:- 523

Term Work:- 50

Lecture Hrs:-02

Practical: - Nil

Studio Hrs:-Nil

Theory:-Nil

Total Hrs:-02

AIM:-To study everyday Architecture in the traditional context built in various culture and geographical regions of India with an emphasis on building types, use, materials, construction and building process.

OBJECTIVE:-

- To introduce the study of vernacular architecture as a process.
- To provide an overview of the various approaches and concepts to the study of vernacular Architecture.
- To study the various vernacular forms in the various regions of India.
- To look at the impact of colonial rule on the vernacular architecture in India.

UNIT-I: - INTRODUCTION

Factors contributed to the evolution with examples. The advantages of studying it and possible applications today.

UNIT-II: - APPROACHES AND CONCEPTS

Different approaches and concepts to the study of vernacular architecture an overview- Aesthetic, architectural and anthropological studies in detail.

UNIT-III: - VERNACULAR ARCHITECTURE IN INDIA AND AT WORLD LEVEL.

Factors that contributed to its evolution. A few examples of tribal settlements. And factors that contributed to the evolution in Middle East, Far East and Tribal Settlements.

UNIT-IV:-VERNACULAR ARCHITECTURE IN MAHARASHTRA

Factors that contributed to its evolution. A few examples of Tribal settlements. Settlement planning strategies.

UNIT-V:-WESTERN INFLUENCES IN VERNICULAR ARCHITECTURE IN INDIA

Colonial influence on the various Goan houses. Evolution of the bungalow from the traditional Bangle planning principles and materials and methods of construction.

REQUIRED READING AND REFERENCES:-

- Encyclopedia of vernacular architecture of the world.Cambridge University Prers, U.K.1997.
- KULBHUSHAN JAIN and MEENAXI JAIN.-Mud Architecture of the Indian Desert,Aadi centre,Ahmedabad.

ELECTIVE-I

INTERIOR DESIGN

Subject code: - 523

Term Work: - 50

Lecture Hrs:-02

Practical: - Nil

Studio Hrs:-Nil

Theory:-Nil

Total Hrs:-02

AIM:-The objective of the course is to create awareness and exposure to interior design is a discipline that is closely, related to the field of Architecture and supplementary it. It would offer a rudimentary knowledge and overview of the various aspects of interior design.

OBJECTIVES:-

To introduce the vocabulary of Interior Design.

To familiarize the students with an overview of interior and furniture design and design movement through history.

To inform the various components of interior space and treatment and finishes for the same.

To familiarize the students with the various components of interior design like lighting, landscaping and furniture.

UNIT-I: - INTERIOR SPACE

Designing the size and form of interiors spaces using user activity analysis and anthropometrics the effect of enclosure, fenestration, colour and lighting a perception of space. Application of scale, proportion to enhance the quality of space. Psychological effect of space.

UNIT-II: COMFORT

Design for comfort, climatic comfort natural and artificial lighting, airconditioning and acoustics services-air-conditioningducts, electrical wiring, water supply and removal of wastewater. Elements of finishing and surface treatment, their need and scope.

UNIT-III: APPLIED DECORATION

Colour, texture, plainand fixture. Emphasizing space through change of levelsand structural form. Modulation of interior space with art objects. Space modulation through artificial and natural lighting. Emphasis of focal paints and unity in interiordesign.

UNIT-IV: ROLE OF FURNITURE

Evolution of furniture style, economic factors of interior design and materials its characteristics and application. Functional classification of space. Barrier free design.

UNIT-V: MATERIALS

Decorative materials for ceilings, walls, floors, Drapery and upholstery for openings and furniture reprehensively and matching them with overall color scheme and comparison. Sources and

Collection of information. Elements of indoor plants and interior landscape and use of water.

ELECTIVE-I
HOUSING

Subject code no:- 523
Lecture hrs no:-02
Studio hrs no:-Nil
Total hrs:-02

Term work:-50
Practical:-Nil
Theory:-Nil.

Aim:- To study the basic concepts and issues related to urban and rural housing.

Objectives:-

- ☑To give an understanding and appreciation of housing in terms of issues, problems, and directions.
- ☑To outline factors that influence housing affordability and to familiarize students with various schemes and policies of the government in the housing sector.
- ☑To inform about the various housing design typologies and the process involved in housing project development.

UNIT-I - EVOLUTION OF HOUSING

Brief review of the historical development of housing in various contexts.

UNIT-II- HOUSING DEMAND AND SUPPLY

National housing policy-Housing agencies and their role in housing development. Impact of traditional life style-Rural housing-Public private sector Housing.

UNIT-III- HOUSING STANDARDS

Issues involved in traditional housing standards for rural and urban areas desirable and minimum standards residential densities.

UNIT-IV- HOUSING STRATEGIES

Review of different forms of housing globally- particularly with reference to the third world countries. Brief acquaintance with some strategies such as sites and services, upgrading, etc. Shelter, simulating private sector production, developing building materials and alternative technologies, improving architectural design etc.

UNIT-V- HOUSING LAYOUTS AND DESIGN

Traditional pattern of housing design, Row Housing, Cluster Housing, Apartment Housing, Low rise versus High rise housing, Neighbourhood unit. Case studies of Housing projects.

REFERENCES:-

Alexander -Christopher

Pattern language, Towns, Buildings-Oxford University press-New York.
HUDCO-Housing for low income.HUDCO.

ELECTIVE-I
BUILDING CONSTRUCTION MANAGEMENT

Subject code no: - 523
Lecture hrs no:-02
Studio hrs no:-Nil
Total hrs:-02

Term work:-50
Practical:-Nil
Theory:-Nil.

AIM: - To introduce the importance of Construction Management in the field of Architecture.

OBJECTIVES:-

☑To an understanding and appreciation of Construction Management in terms of issues, techniques, problems and directions, economic strategies.

UNIT-I- INTRODUCTION

- Construction in India, its role in development, Importance of management in construction, role of construction manager, construction team, responsibilities and authorities of construction manager organization.

UNIT-II-MANAGEMENT TECHNIQUES

Planning for construction projects: Principles, Objectives, advantages of planning, stages of planning.

Scheduling:-Defination, Advantages,methodes of scheduling, bar chart, milestone chartcontrolling.

Life cycle cures:-Job layout, work breakdown structure.

PROJECT MANAGEMENT THROUGH NETWORKS:-Introduction, Objective, Advantages, terms and definition, type of networks, rules for drawing a network.

Introduction to PERT, CPM, finding critical path.

UNIT-III-INTRODUCTION TO CONSTRUCTION EQUIPMENTS:-

Performance characteristics and usage of equipment used in large scale projects.

Human resource management: - Manpower utilization at various stages, recruitment, training, under and over **bhsdfwgui**

Material Management:-Materials of construction, classification, codification, estimation of materials procurement, inventory stock control, purchase procedure, stores management.

Quality control in construction: - Importance of quality, elements of quality, organization of quality control, quality assurance techniques.

UNIT-IV-LABOUR LEGISLATION PERTAINING TO CONSTRUCTIONINDUSTRY:-

Payment as per wages act, migration Act, Factories Act, contract labour Act, labour welfare fund Act, workman's compensation Act.

Construction safety management:-Importance of safety benefits to employees.

ELECTIVE-II
ARCHITECTURAL CONSERVATION

Subject codeno:- 524
Lecture hrs no:-02
Studio hrs no:-Nil
Total hrs:-02

Term work:-50
Practical:-Nil
Theory:-Nil.

AIM:-This course is designed to address Conservation as an idea that enhances the quality of life as an effective planning strategy, a criticism of universal modernism and a way to address current status of conservation in India.

OBJECTIVE:-

- ☑To introduce the various issues and practices of conservation.
- ☑To familiarise students with the status of conservation in India and the various agencies involved in the field of conservation worldwide and their policies.
- ☑To outline the status of conservation practice in India and various guidelines for the Preservation, Conservation, and Restoration of buildings.
- ☑To inform the students about the character and issues of our heritage towns through case studies.

UNIT I - INTRODUCTION TO CONSERVATION

Understanding heritage, types of heritage, Heritage conservation -Need, Debate and purpose. Defining conservation. Distinction between Architecture and Urban conservation. Agencies like INYACH, UNESCO and their role in conservation.

UNIT II - CONSERVATION IN INDIA

Museum conservation, monument conservation and the role of Archaeological survey of India and INYACH- State Government and Central Government policies and legislation- invention and projects. Select case studies of sites such as ELLORA, AJANTA, BIBI KA MAKBARA.

UNIT III - CONSERVATION PRACTICE

Listing of monuments, documentation of historical structures- assessing architectural character -guidelines for preservation, rehabilitation and adaptive issues of historic structures -case studies-heritage site management.

UNIT IV - URBAN MANAGEMENT

Overview of urban history of India and Maharashtra understanding the character and issues of historic cities, select studies of historic cities, historic districts and heritage precincts.

UNIT V - CONSERVATION PLANNING

Conservation as a planning tool- financial incentives and planning tools such as Transferable Development Rights (TDR) -Urban conservation and heritage tourism -case studies- conservation project management.

REFERENCES:-

- 1) B.K.Singh-State and Culture,Oxford,New Delhi.
- 2) INTACH Publication-New Delhi.
- 3) Seminar issues on Conservation.

ELECTIVE-II
ARCHITECTURAL JOURNALISM

Subject codeno:- 524
Lecture hrs no:-02
Studio hrs no:-Nil
Total hrs:-02

Term work:-50
Practical:-Nil
Theory:-Nil.

AIM:- The course prepares ground for the students to give an understanding into the fundamental issues in architectural photography and develop the skill to creat Artical/Presentation capturing the essence through the Photographs.

OBJECTIVES:-

- ☑To prepare the students for photo journalism.
- ☑To enable the students to writing skills,Architectural language to explain the famous buildings.
- ☑To convey the need for Architectural critism,Descriptive critism.

UNIT-I – DEFINATION OF PHOTO JOURNALISM

Brief history- photographs as social documentries.Birth of photo journalism since 1950's-visual awarness-visual survey.

UNIT-II – DEVELOPMENT OF WRITING SKILL

Usage of language and vocabulary and grammer- introduction to methodology of writing essays,news writing,precis writing,writing in Architectural blogs,listening comprehension,
analysis talks and information gathered and to edit garhered information to build an artical.
Originality of topic.
Collecting clippings from articies,blogs and books.

UNIT-III – PHOTO JOURNALISM IN PERSPECTIVE

Snap shots advance amateus photography Art photography-photo journalism -approach to photo journalism-news papers and magazine design elements page make up-layout-colour scheme-Documentry of places-rural-urban public relations.

UNIT-IV – KEY TEXT CONCERNING ARCHITECTURAL JOURNALISM AND JOURNALISTS

To critically contrast their outputs in terms of production content and /or presentation to develop an ability to critically appraise selected individual pieces of journalism.Awards forjournalism and some of the important recipients.

UNIT-V – PRODUCTION OF CONTEMPRORY ARCHITECTURAL JOURNALISM

Building products-Instant report-Editing-Editorial thinking-the picture editor-Editing practices,creating drama-photo editing-Documentry-evolution of word document-methods and techniques.

Arrengement should include an article based on ability to original plan research present and produce a piece of architectural journalism.The techniques and process used in the production should be influenced by the student.

REFERENCES:-

- 1) Mohd.,Al Asad- Architectural critism and Journalism.
- 2) Bush Akiko- The photography of architecture,twelve views .New yard Van Nostrood,Reinhold co.1987
- 3) Sommer Robert- Tom Walfe on Modern Architecture.

ELECTIVE-II
SUSTANABLE PLANNING AND ARCHITECTURE

Subject code no:- 524
Lecture hrs no:-02
Studio hrs no:-Nil
Total hrs:-02

Term work:-50
Practical:-Nil
Theory:-Nil.

AIM:- To provide an overview of the concepts of sustainable practices in planning and design of the build environment.

OBJECTIVES:-

- ☑To understand the concept of sustainability and sustainable development.
- ☑To understand the various issues like climate change, ecological footprint etc.
- ☑To understand low impact construction practices, life cycle costs and alternative energy resources.
- ☑To familiarize the student with the various rating systems for building practices with case studies.
- ◆Through case studies to understand the concept of sustainable communities and the economic and social dimensions.

UNIT-I-CONCEPT OF SUSTAINABILITY

Carrying capacity-sustainable development Brundland report-Ethics and visions of sustainability.

UNIT-II-ECO SYSTEM AND FOOD CHAIN

Natural cycles-Ecological foot print-Climate change and sustainability.

UNIT-III-SELECTION OF MATERIALS

Eco building materials and construction Biominicry-Low impact construction and recyclable products and embodied energy. Life cycle analysis. Energy sources-Renueable and non renewable energy.

UNIT-IV-GREEN BUILDING DESIGN

Rating system-LEED, GRIHA, BREEAM etc. case studies.

UNIT-V-URBAN ECOLOGY

Social economic dimensions of sustainability, Urban heat island effects sustainable communities-Case studies.

REFERENCES:-

- 1) Sustainable Architecture:-Low tech houses by Mostaedi (A) Central Broto-2002.
- 2) Environmental Brief:-Pathways for Green Design by Hyder (R) Taylor L Frances-2007
- 3) Green Architecture-Design for Sustainable future by Brenda L Vale (R) Thomes and Hudson-1996.

ELECTIVE-II
URBAN DESIGN

Subject code no:- 524
Lecture hrs no:-02
Studio hrs no:-Nil
Total hrs:-02

Term work:-50
Practical:-Nil
Theory:-Nil.

- AIM :** The course focuses on creating awareness in students in the subject of “Urban Design” as a specialization in the area of architecture and urban planning.
- OBJECTIVE :** To give an overview of urban design as an interface between the fields of architecture & urban planning.
- To impart the knowledge about various developments in the field of urban design.
- UNIT - I** Discussion on Architecture, urban design, Town Planning interface. Urban Morphology & elements of urban design. Nature of urban design projects in public & private developments.
- UNIT - II** Classical Cities, Medieval towns, neo classic cities and industrial towns, characteristics of town built by Hindu & Muslim rulers in India. Colonial inheritance, growth of port town, civil lines, cantonments, railway & resort towns & Design in New Delhi.
- UNIT - III** Modern movements in city design such as “City beautiful” and “Garden City movements, utopian Model Towns in the West Changing Structure of Cities : Sectors, blocks, streets squares, buildings and open spaces.
- UNIT - IV** Role of Planning agencies such as development authorities, Urban Arts Commission in the Design of Cities. Influence of City development policies namely Master plans, zoning regulations on Urban Design. Built form & space requirement in residential, Commercial, Industrial & recreational land uses, activities. Patterns of sub-division & land development.
- UNIT - V** Elements of urban spaces : Squares and streets. Uses of landscape in urban design, such as tree avenues, street fencing, side walks, etc.
- UNIT - VI** Urban Conservation & its role in urban design. Past & present trends in urban conservation Role of architectural control in urban conservation & city character & style.
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REFERENCE BOOKS –

1. Mumford Lewis – City in History – its origin transformation & its prospects.
 2. Gibbered Frederic – Town Design
 3. Krier Rob – Urban Spaces – 3rd Edition
Academy Edition, London, 1987
 4. Moughtin Cliff – Urban design street & square.
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