



**5-Year Bachelor of Architecture (B.Arch.) Curriculum and
Syllabus
Eight Semester**

Course Code	Course Title	Contact Hrs. / Week			Credit
		L	S	P	
Theory					
TIUAR - 801	Professional Practice and Entrepreneurial Development	3	0	0	3
TIUAR- 802	Urban Planning	3	0	0	3
TIUAR- 803	Industrial Architecture	3	0	0	3
TIUAR- 804	Professional Ethics	2	0	0	2
TIUAR- 805	Research Methodology	2	0	0	2
TIUAR/E - 806A/B	Cost Effective Technology in Building Construction OR Transportation Planning	2	0	0	1
Practical					
Sessional					
TIUAR- 807	Architectural Design - VII	0	16	0	12
Institute Programme					
Total Credits					26

Note: The Sessional and theory subject load would not allow any space for Institute Programme since 7th Semester



**PROFESSIONAL PRACTICE AND ENTREPRENEURIAL DEVELOPMENT (TIUAR –
801) L – S – P (3 – 0 – 0)
Credits-3**

Course Objective:

- To introduce to the professional, vocational and legal aspects of architectural practice.
- To inform about the professional services and ethics to be shown towards society, clients, fellow architects and co-workers.
- To inform about the scope of services to be provided and project responsibilities during design and construction.
- To inform about the scale of charges for the different architectural services to be rendered
- To give a know-how about the establishment and management of a private architectural office and familiarize the students with project and office management aspects.
- To familiarize with various kinds of building regulations and codes to followed to control and promote the ordered growth of a city/town.
- To inform about the different types of tenders and contracts, its merits and demerits, tendering process and suitability w.r.t to different types of architectural projects.
- To inform about the method of seeking municipal approval and submission plans.
- To explain about the significance, purpose and types of architectural competitions

MODULE I

Architects Act 1972

Detailed study of the act, its provisions and recent amendments, Role and responsibilities of Council of Architecture, role of its electorate, procedure of membership.

MODULE II

Role of Professional body - Indian Institute of Architects

Its working, constitution and bye laws, categories of membership, election procedures, Code of conduct, Role of its conventions, its publications, etc.

MODULE III

Role of an Architect in Society

Architectural profession as compared to other professions; Architects approach to works; ways of getting works; types of works, works partly executed by other architect; conditions of engagement between the architect and client; Architects (Professional Conduct) Regulations, 1989; Architects' Professional Liability; Professional Misconduct; Scope of work; Copy rights; Scale of charges; Variation of charges; Mode of payment; Schedule of payment; Termination of services; Specialized building services; Professional service tax; Architects relation with other parties connected with works such as client, contractor, sub-contractors, consultants, municipal and public authorities.

MODULE IV

Architectural Competitions

Its purpose, types of Architectural competitions, its guidelines for participation, prizes, assessment, etc.

MODULE V

Architects in practice

- a. Private practice - Partnership office management, methods of organization, filing, documentation and working. Tax- liability
- b. Salaried appointment - Public sector, Private sector jobs, procedure of operation in



government organization.

MODULE VI

Tendering process

Preparation of tender documents, method of writing tenders, opening of tenders. Tender valuation process, Contracts; types of contracts such as item rate, labour, lump-sum, cost plus percentage etc; their merits and demerits. General principles of Indian contract Act; Building contracts, conditions and forms of contract, study of standard contract of the Indian Institute of Architects. Preparation of contract documents, general conditions of contract, Administration of contract; Interim certificates, defect liability periods, retention amount, security deposits, mobilization money and virtual completion

MODULE VII

Principle of Arbitration, Indian Arbitration Act 1940, Powers and duties of arbitrators, revoking authority; umpire, award etc.

Easement: definition; various types of easements; document and servant owners; essential conditions for enjoyment of easement; Fire insurance's definition, cover note; insurance for new work and additions; insurable value of property, claim for damage due to fire

Preliminary knowledge of transfer of property Act; registration, stamp duty under Registration process. Tax Liability, wealth, land acquisition Acts; general information about land acquisition procedures. Accidents during progress of work and after completion, damage to persons and properties affected; workmen's compensation Act with regards to the affected persons and properties. Consumer protection Act and related acts on Architects.

Recommended Books:

1. Roshan Namavati; Professional practice.
2. Code of Professional Practice : I. I. A.
3. Architect Act 1972.
4. Handbook of Professional Documents- 2005, by Council of Architecture.



URBAN PLANNING (TIUAR – 802)

L – S – P (3 – 0 – 0)

Credits-3

Objectives:

- To have an overview on the vocabulary of Human settlements To understand the various elements of Human Settlements and the classification of Human Settlements
- To familiarize the students with Planning concepts and process in Urban and Regional Planning.

MODULE I

Introduction

Elements of Human Settlements – human beings and settlements – nature shells & Net work – their functions and Linkages – Anatomy & classification of Human settlements – Locational, Resource based Population size & Occupational structure.

MODULE II

Forms of Human Settlements

Structure and form of Human settlements – Linear, non-linear and circular – Combinations – reasons for development – advantages and disadvantages – case studies – factors influencing the growth and decay of human settlements.

MODULE III

Planning Concepts

Planning concepts and their relevance to Indian Planning practice in respect of Ebenezer Howard – Garden city concepts and contents – Patrick Geddes – Conservative surgery – case study – C.A. Perry – Neighborhood concept Le Corbusier – concept and case studies.

MODULE IV

Urban Planning and Urban Renewal

Scope and Content of Master plan – planning area, land use plan and Zoning regulations – zonal plan – need, linkage to master plan and land use plan – planned unit development (PUD) – need, applicability and development regulations - Urban Renewal Plan – Meaning, Redevelopment, Rehabilitation and Conservation – JNNURM – case studies.

MODULE V

Issues in contemporary urban planning in India

Globalization and its impact on cities – Urbanisation, emergence of new forms of developments – self sustained communities – SEZ – transit development – integrated townships – case studies.

Recommended Books:

1. C.L. Doxiadis, Ekistics, -An Introduction to the Science of Human Settlements, Hutchinson, London, 1968.
2. Andrew D. Thomas, —Housing and Urban Renewal, George Allen and Unwin, Sydney, 1986.
3. —Ministry of Urban Affairs and Employment, Government of India, New Delhi, 1999



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4. –Urban Development Plans: Formulation & ImplementationI , Guidelines, 1996.
5. Madras Metropolitan Development Authority, _Master Plan for Madras Metropolitan Area, Second Master Plan, 2007.
6. Government of India, —Report of the National Commission on UrbanisationII, 1988.
7. Hansen N., —Regional Policy and Regional IntegrationII, Edward Elgar, UK, 1996.
8. Sandhu. R. S., —Sustainable Human SettlementsII, Asian Experience, Rawat publications, 2001.
9. Gastek.P.,—Living Plans:New concepts for advanced housingII, Brikhauser publications, 2005.



INDUSTRIAL ARCHITECTURE (TIUAR – 803)

L – S – P (3 – 0 – 0)

Credits-3

MODULE I

Industrial Estates – requirements of factory and codes – classification of industrial occupancy – patterns of industrial estates – integrated aspects of design – general requirements of different types of industries

MODULE II

History of factory buildings – functional planning of spaces – plan layout – flexibility of design and future expansion

MODULE III

Industrial Structures – steel structures and concrete structures – requirements of various finishing works

MODULE IV

Environmental Design for Industries – aspects of external environments such as noise control regulations, pollution levels, sewage disposal and hygiene – factory and landscape

MODULE V

Layout and organization of Industrial Townships

Recommended Books:

1. Gurcharan Singh – Building Planning Designing And Scheduling
2. Jolyon Drury and Peter Falconer – Buildings for Industrial Storage and Distribution
3. Allison Arieff, Joseph Tanney, Robert Luntz – Modern Modular: The Prefab Houses of Resolution: 4 Architecture



PROFESSIONAL ETHICS (TIUAR – 804)

L – S – P (2 – 0 – 0)

Credits-1

Objectives:

- To give an introduction to the students about the architectural profession and the role of professional bodies and statutory bodies.
- To teach the students about the importance of code of conduct and ethics in professional practice and the mandatory provisions as per Architects Act 1972.
- To expose the students some of the important legal aspects and legislations which have a bearing on the practice of architectural profession.
- To enable the students to grasp the advanced issues concerning professional practice such as tendering, contracting including alternative practices in project execution and project management.
- To expose the students to the implications of globalisation on professional practice with particular reference to WTO and GATS and equip them for international practice.

MODULE I

Introduction to architectural profession code of conduct and ethics

Importance of Architectural Profession – Role of Architects in Society – Registration of Architects – Architect's office and its management – Location, organisational structure – Infrastructure requirement, skills required, elementary accounts – Tax liabilities. Role of Indian Institute of Architects – Architects Act 1972 (intent, objectives, provisions with regard to architectural practice) – Council of Architecture (role and functions) – Importance of ethics in professional practice – Code of conduct for architects, punitive action for professional misconduct of an architect.

MODULE II

Architect's services, scale of fees & competitions

Mode of engaging an architect – Comprehensive services, partial services and specialized services – Scope of work of an architect – Schedule of services – Scale of fees (Council of Architecture norms) – Mode of payment – Terms and conditions of engagement – Letter of appointment. Importance of Architectural competitions – Types of competitions (open, limited, ideas competition) – Single and two stage competitions – Council of Architecture guidelines for conducting Architectural competitions – National and International Competitions – Case studies.

MODULE III

Tender & Contract

Tender - Definition - Types of Tenders - Open and closed tenders - Conditions of tender – Tender Notice - Tender documents - Concept of EMD - Submission of tender - Tender scrutiny - Tender analysis – Recommendations – Work order - E-tendering (advantages, procedure, conditions). Contract – Definition - Contract agreement - its necessity – Contents (Articles of Agreement, Terms and Conditions, Bills of Quantities and specifications, Appendix) – Certification of Contractors Bills at various stages. New trends in project formulation and different types of execution (BOT, DBOT, BOLT, BOO, etc.) - Execution of projects – The process (Expression of interest, Request for Proposal, Mode of Evaluation of Bids, Award of work)



MODULE IV

Legal aspects

Arbitration (Definition, Advantages of arbitration, Sole and joint arbitrators, Role of umpires, Award, Conduct of arbitration proceedings) – Arbitration clause in contract agreement (role of architect, excepted matters) Easement – (meaning, types of easements, acquisition, extinction and protection) Copy rights and patenting – (provisions of copy right acts in India and abroad, copy right in architectural profession) Consumer Protection Act (Intent, Architects responsibility towards his clients)

MODULE V

Important legislations and current trends

Development Regulations in Second Master Plan for CMA, Chennai Corporation Building Rules 1972 - Factories Act – Persons with Disabilities Act – Barrier Free Environment - Coastal Regulation Zone – Heritage Act. Globalisation and its impact on architectural profession – Preparedness for International practice – Entry of Foreign architects in India – Information Technology and its impact on architectural practice. Emerging specialisations in the field of Architecture – Architect as construction / Project manager – Architectural journalism – Architectural photography.

Recommended Books:

1. Architects Act 1972.
2. Publications of Handbook on Professional practice by IIA.
3. Publications of Council of Architecture-Architects (Professional conduct) Regulations
4. 1989, Architectural Competition guidelines
5. Roshan Namavati, –Professional practice, Lakhani Book Depot, Mumbai 1984.
6. Ar. V.S. Apte, —Architectural Practice and Procedure, Mrs. Padmaja Bhide, 2008
7. Development Regulations of Second Master Plan for Chennai Metropolitan Area -2026.
8. J.J.Scott, –Architect's Practice, Butterworth, London, 1985
9. Second Master Plan – Development Regulations – CMDA, 2008
10. T.N.D.M. Buildings rules, 1972.
11. Consumer Protection Act, 2011
12. Arbitration Act, 2005
13. Persons with Disabilities Act, 1995



RESEARCH METHODOLOGY (TIUAR– 805)

L – S – P (2 – 0 – 0)

Credits-2

MODULE I

Research Aims & Literature Search

Research Aims and Philosophy, research paradigms. Literature search and review, the use of libraries and data bases, aim and structure of a literature review, Developing research proposals.

MODULE II

Statistics for Research

Statistics for research – statistical concepts, probability, the hypothesis and testing it, descriptive statistics, central tendency and dispersion. Inferential statistics. Introduction to parametric and non-parametric methods.

MODULE III

Scientific Writing

Introduction to scholarly technical writing and publishing a paper, writing a research report, presentation of scientific research, structure of a research report.

MODULE IV

Physical and Behavioural research

Introduction to behavioural research and physical research. Behavioural research, obtain data, questionnaires, interviews, un-obstructive and obstructive measures, scales such as a semantic differentials, physical research, laboratory, resources available, equipment for laboratory and site measurement. Field survey and its relevance

MINOR DISSERTATION:

Each student shall prepare a a minor research / dissertation on any topic in architecture relevant to any chosen objective or any aspect of the Thesis Project. The minor dissertation shall be a research –based **conceptual study** directly associated with the thesis topic. It shall be submitted in the form of a report with appropriate referencing, bibliography etc. and the highlights shall be also presented as a seminar.

Recommended Books:

1. Giere R.N. —Understanding Scientific ReasoningII, Holt Rinehart & Winston, U.K., 1991.
2. Moroney M.J., —Facts from FiguresII, Penguin, 1990.
3. Day R.A., —How to Write and Publish a Scientific PaperII, Cambridge University Press, R.K. 1991.
4. Seigel S. & Castellan N.J., —Nonparametric Statistics for the Behavioural SciencesII, Mc Graw Hill Book Company, New York, 1988.



COST EFFECTIVE TECHNOLOGY IN BUILDING CONSTRUCTION (TIUAR/E –805A)

L – S – P (2 – 0 – 0)

Credits-1

MODULE I

Cost effective techniques: Need, Planning aspects, construction aspects, maintenance and longevity aspects

MODULE II

Choice of materials in Indian/Kerala conditions, indigenous building materials, organic and inorganic building materials, alternative building materials, use of industrial and agricultural wastes - Survey of such materials development by research organizations like CBRI, SERC etc.

MODULE III

Significance of construction technology: Relevance of improving of traditional technology, relevance of innovative technology/alternate technology, survey of such technologies by various research institutes.

MODULE IV

Critical analysis (in terms of initial investment, maintenance cost and longevity of buildings) of the local adaptation of the innovative technologies by various agencies.

Recommended Books:

1. Hand book of low cost housing
2. G.C. Mathew, 'Low cost housing in development countries'
3. Publication of CBRI, SERC, RRL, NBO, COSTFORD.



TRANSPORTATION PLANNING (TIUAR/E – 805B)

L – S – P (2 – 0 – 0)

CREDITS-1

MODULE I

Scope of the subject - Nature of traffic problems in cities and measures to meet the problems - Landuse and city planning controls – Interdependence of land use and traffic. Systems approach to transport planning

MODULE II

Traffic and the environment - Detrimental effects of traffic on the environment – Noise, air pollution, vibration, visual intrusion and degrading the aesthetics, severance and land consumption – situation in India.

MODULE III

Transportation survey - Type of surveys – origin destination survey, need and uses of OD surveys, survey methods. O.D matrix.

MODULE IV

Traffic signs – importance – Need for international standardization - General principles and type of traffic sign - Traffic signals. Parking – Parking problems and ill effects – Parking space requirement standards. Traffic control aids and street furniture - Avenue planting and landscape – Qualities of trees in avenue planting

Recommended Books:

1. L.R. Kadiyali – ‘Traffic Engineering and transport Planning’
2. Pual. H. Wright, Norman J. Ashfod – ‘Transportation Engineering – Planning and design’
3. Vukan R. Vuchic – ‘Urban public transportation’
4. Donald F Wood - ‘Contemporary Transportation’.



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ARCHITECTURAL DESIGN (TIUAR – 806)

L – S – P (0 – 16 – 0)

Credits-12

Objectives:

- Application of Design theory and principles and
- Design of Low rise / medium rise /high rise buildings with complex issues to be tackled covering functional relationship, climatic condition, social aspects along with structural considerations and building services
- Application and use of relevant building bye-laws and provisions of **National Building Code**
- Estimation of areas and approximate cost

Main Design Exercise Duration (approx.)

1. Terminal facilities for Bus or Modal interchange for Railways
2. Campus Planning for Institutional Project
3. Public buildings like Mall

Design (Time) Exercise Duration

1. Bank/ Post Office
2. Departmental store

Viva voce

Final Viva-vice on all the design assignments to be conducted at the end of the semester