

Fourth year 2015 Pattern

Semester VII

DRAFT SYLLABUS FOR APPROVAL OF FACULTY

DESIGN VII			
Subject Code		4201554 (SV)	
Teaching Scheme		Examination Scheme	
Total Contact Periods per week= 12 (lectures=3, Studio=9)	12	Sessional (Internal)	100
		Sessional (External)	100
		Viva (Internal)	25
		Viva (External)	25
		In-semester exam	nil
		End Semester exam	nil
		Total Marks	250
		Total Credits	8

Course Objective

Subject aims at preparing the students to handle complex architectural issues at this stage addressing various challenges in terms of scale, complexity of functions, social economic context, traffic and vehicular movement and so on. Along with the challenges of physical issues, students are also now expected to address spatial and visual language of their project with reference to the urban context and setting of their site.

Course Outline

- Multifamily Residential Development with Focus on : Mixed Use Development, Development of Communities, Addressing Issues of Social Stratification v/s Inclusiveness, Identification of target Group/ End User's requirement, Relation of Location/ Land values on Defining the Housing Product, Project being part of the City, Context, Green Initiatives, Efficient Planning of Services Minimum Area 100 to 200 depending on Context and Complexity. Designed within parameters as laid out by Local Authority and NBC.
- One Esquee / Charette be undertaken in each of the Terms (One week Duration) exploring design solution for a project / component , ideas for which would help the Main Design project.

Submissions

The design has to be communicated through architectural graphics, two and three-dimensional sketches, models and narratives.

ADVANCED BUILDING TECHNOLOGY AND SERVICES I			
Subject Code		4201555 (SV)	
Teaching Scheme		Examination Scheme	
Total Contact Periods per week= 07 (lectures=3, Studio=4)	07	Sessional (Internal)	75
		Sessional (External)	75
		Viva (Internal)	25
		Viva (External)	25
		In-semester exam	nil
		End Semester exam	nil
		Total Marks	200
		Total Credits	5

COURSE OBJECTIVES:

- To introduce advanced structural systems, materials and services required in buildings with complex and special requirements and enable the students to integrate the same in design.

COURSE OUTLINE:

Unit 1 .Multi-basements. Design and construction of multi-basements giving constructional details required for natural Lighting, ventilation and surface water disposal. Study of various methods of access to parking areas other than ramps. Drawings to include application of all required services. [Minimum four A1 drawings]

- Unit 2. Industrial Buildings. : Types of roofing systems, PEB systems, Proprietary systems, Industrial flooring.
Assignments. Drawings showing structural system, construction details and services in plan, section and elevation [minimum two A1 drawings]
- Unit 3. Swimming pools.
Design and construction of swimming pools (Olympic size, semi Olympic, leisure pools) and study of situations such as -- at ground level , podium level and upper / roof level with reference to all constructional and services details. [Minimum two A1 drawings]
- Unit 4 Study of long span structures [indoor stadia, railway / metro stations, shopping malls, sky walks etc] in RCC and Steel to understand structural behavior. Introduction of lighting and ventilation of spaces in such large buildings.
Assignment would comprise of Case study report and construction details in sketch form.

SESSIONAL WORK:

- Drawings / sketches / notes to be as mentioned in the course outline above. Computerized drawings may be allowed only when individual design / detailing is undertaken.

REFERENCE BOOKS

PEB manufacturer's details
Advanced Building Construction By MACKEY
Stadia by John Geraint

PROFESSIONAL PRACTICE I			
Subject Code :		4201556(PP)	
Teaching Scheme		Examination Scheme	
Total Contact Periods per week = 3 (Theory Lectures – 1 + studio -2)	03	Sessional (Internal)	Nil
		Sessional (External)	Nil
		In-semester exam	30
		End Semester exam	70
		Total Marks	100
		Total Credits	2

COURSE OBJECTIVES:

- To acquaint the Student with the Role and Stature of an Architect in Society, and understand the duties, responsibilities, liabilities and ethics as a professional.

- To acquaint the Student with the Scope and Avenues of professional Architectural services, and the demands and Mode of professional practice, and to prepare the Student for the professional field.
- To familiarize and prepare the Student with adequate knowledge of an Architect's office administration, documentation and procedures of office and site management to enhance his comprehension and utility during his professional training in the field in Semester IX.

COURSE OUTLINE :

- Unit 1 Introduction to the nature, scope and avenues of service and professional practice as an Architect. Define the Role of an Architect as a technical professional - who is not a Trader or a Businessman. Illustrate the changing nature of the Architects profession- Local & Global competition in the field.
- UNIT 2 The Architects Act 1972 - The Council of Architecture, its composition, legal status and mandate for to Registration of Architects and for monitoring the Academics and Profession of Architecture, Rules and Regulations of the Council regarding Professional Liabilities & Code of Conduct.
- Unit 3 Avenues of Professional service and mode and nature of professional Practice - Types of Organisations - Scope of comprehensive Services, Scale of Fees, and Office Management, Project management, Site supervision, Documentation, Taxation, Banking and Insurance.
- Unit 4 Architectural Competitions - Pros and Cons - with Rules and Regulations of the Council.
- Unit 5 Introduction to IIA, IIID, IUDI, ITPI, ISOLA and such professional organisations and the need for Architects to be aware, sensitive and active in Social and Civic issues in Urban context.

REFERENCE BOOKS :

- | | | |
|----|--------------------------------------|---------------------------------------|
| 1) | Handbook of Professional Documents | - Council of Architecture publication |
| 2) | The Architects Act, 1972 | - Govt. of India publication |
| 3) | Professional Practice | - By Roshan H. Namavali |
| 4) | Professional Practice in India | - By Madhav G. Deobhakta |
| 5) | Architectural Practice and Procedure | - By Vasant .S. Apte |

URBAN STUDIES-I			
Subject Code		4201557 (SS)	
Teaching Scheme		Examination Scheme	
Total Contact Periods per week (lectures=1, Studio=2)	03	Sessional (Internal)	25
		Sessional (External)	25
		Viva (Internal)	nil
		In-semester exam	nil
		End Semester exam	nil
		Total Marks	50
		Total Credits	02

COURSE OBJECTIVES:

- To enable students to understand the urban context of an Architectural Project beyond the site and understand the implications of various factors (such as traffic-transportation, socio economics, urban landscape, spatial and visual aspects etc) influencing the development of an urban area.
- To introduce the students to urban planning and design theories and concepts and enable them to undertake planning and design of large scale land development.

COURSE OUTLINE:

- Introduction to urban studies and relevance of its learning in Architecture profession. Principles and theories of Urban Planning and Urban Design.
- Various aspects of urban land.
- Urban residential developments such as neighborhood planning, high-rise housing, slum rehabilitation, public housing, town planning schemes etc
- Affordable housing: introduction and concepts.

SESSIONAL WORK:

- **Handwritten journal** based upon the theory syllabus as above.
- **Assignments:**
 1. Subdivision of land for residential development (approx area 4Ha) –Individual submission (20 marks)
 2. Study of housing typologies as mentioned in course outline- Case study in a group of maximum 5 students (20 Marks)
 3. One Tutorial based upon course outline (10 marks)

REFERENCE BOOKS

1. Gallion, Arthur. **The Urban Pattern**. New Delhi: CBS Publishers and Distributors, 2003
2. Bacon, Edmund. **Design of Cities** London: Thames and Hudson, 1974
3. Paddison, Ronan. **Handbook of Urban Studies**. London: sage Publications, 2001
4. Correa, Charles. **Housing and Urbanisation**. London: Thames and Hudson, 2000.
5. Mohanty, Swati. **Slum in India**. New Delhi: APH Publishing Corp., 2005.
6. Jagdale, Rohit. **Slum Rehabilitation Schemes in Mumbai**. University of Texas 2014.

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RESEARCH IN ARCHITECTURE I			
Subject Code		4201558 (SS)	
Teaching Scheme		Examination Scheme	
Total Contact Periods per week (lectures=1, Studio=2)	3	Sessional (Internal)	25
		Sessional (External)	25
		Viva (Internal)	-
		Viva (External)	-
		In-semester exam	nil
		End Semester exam	nil
		Total Marks	50
		Total Credits	2

COURSE OBJECTIVES:

- To introduce students to Research in Architecture and its value in design
- To enable the students to prepare a research proposal.

COURSE OUTLINE:

- Unit I -- Introduction to the meaning and need of research in architecture. Introduction to various concepts such as types of variables, measurement of variables, sample selection, ethics in research.
- Unit II – Process of research – Methodology
- Unit III – Literature study

- Unit IV – Methods of research in architecture. Use of surveys, observations, experiments, secondary sources.

SESSIONAL WORK:

- Tutorial based on all of the above units
- Literature Review of at least 5 papers related to the topic of their choice.
- Research proposal giving details of aims, objectives, scope, limitations, methods, samples selected on the topic approved by the head of the institution.

NOTE:

- The guide must have minimum 5 years of teaching experience. Preferably a guide should not guide more than 8 students.
- It is desirable that the research seminar is presented in front of experts.
- It is beneficial to the students if the topic is related to the architectural design project of semester X.

REFERENCE BOOKS

1. Babbie, E. *The Practice of Social Research*. third edition. Belmont: Wadsworth Publishing Co., 1983. book.
2. Cresswell, J.W. *Research Design: Qualitative and Quantitative Approaches*. Thousand Oaks: Sage, 1994. Book.
3. De Vaus, D.A. *Surveys in Social Research*. Jaipur: Rawat Publications, 2003. Book.
4. Dey, I. *Qualitative Data Analysis: A User Friendly Guide for Social Scientists*. London: Routledge, 1993. Book.
5. Groat, L. & Wang, D. *Architectural Research Methods*. New York: John Wiley and Sons Inc., 2002. Book.
6. Kothari, C.R. *Research Methodology: Methods and Techniques*. New Delhi: Wishwa Prakashan, 2005. Book.
7. Michelson, William. *Behavioural Methods in Environmental Design*. Stroudsburg, Pennsylvania: Dowden, Hutchinson and Ross, Inc., 1982.
8. Nachmias, C.F. & Nachmias, D. *Research Methods in Social Sciences*. Great Britain: St. Martin's Press Inc., 1996. Book.
9. Patton, M.Q. *Qualitative Evaluation Methods*. Newbury Park: Sage Publications, 1980. Book.
10. Sanoff, H. *Methods of Architectural Programming*. Vol. 29. Dowden Huthinson and Ross, Inc., 1977. document.
11. —. *Visual Research Methods in Design*. USA: Van Nostrand Reinhold, 1991.

Quantity Surveying And Estimation - I			
Subject Code		4201559 (PP)	
Teaching Scheme		Examination Scheme	
Total Contact Periods per week (lectures=1, Studio=2)	03	Sessional (Internal)	Nil
		Sessional (External) Viva (Internal)	Nil
		Viva (External)	Nil
		In-semester exam	30
		End Semester exam	70
		Total Marks	100
		Total Credits	2

COURSE OBJECTIVES:

- To Introduce Estimation as an important Subject for Architecture.
- To Understand Different methods of Computing Quantities for items of work in a structure.
- To enable students in working out quantities of various items of work for simple load bearing and R.C.C. framed structure and acquaint them with various types of estimates including standard method of measurement on building works and mode of measurements as adopted by I.S 1200.

COURSE OUTLINE:

Unit I. Introduction to Quantity Surveying and Estimating, Data for Estimate, Purpose of Estimating, Accompaniments of an Estimate, Qualities of an Estimator, Spot Items, Contingencies, Prime Cost & Provisional Sums, Provisional Quantities, Extra Items of work.

Unit II. Different types of Estimate their uses & Characteristics, Schedule of Quantities, Schedule of Rates & its uses, Stages of work, Complete Estimate of a Project, Methods of taking out Quantities, Measurement Sheet, Abstract Sheet, Bill of Quantities,

Unit III. Study of mode of measurement as stipulated in IS-1200, Classification of strata as per IS-1200, Trial pit data, Lift and Leads , Unit of Measurement.

Unit IV Bill certification, Part rate certification, Interim/Running Bill Certification,

Unit V Working out quantities for load bearing structure (below plinth only) of approximately 15-30 Sqm by offset and centre-line method illustrating L and T junctions and preparing measurement sheet and abstract for all items of work.

Unit VI Working out quantities for R.C.C. G+1 structure of approximately 150-200 sqm and preparing measurement sheet and abstract for all items of work.

REFERENCE BOOKS

1. *B.I.S 1200- Part-I 1992.* n.d.
2. Prof. B.N.Dutta, *Estimating and Costing in Civil Engineering.*
3. B.S.Patil. *Civil Engineering Contracts and Estimates.*
4. Dr. Roshan Namavati. *Professional Practice.*
5. Rangawala. *Estimating Costing and Valuation.*

Specification Writing I			
Subject Code		4201560 (PP)	
Teaching Scheme		Examination Scheme	
Total Contact Periods per week (Lectures = 1 Studio = 2)	3	Sessional (Internal)	nil
		Sessional (External)	nil
		Viva (Internal)	nil
		Viva (External)	nil
		In-Semester exam	30
		End-Semester exam	70
		Total Marks	100
		Total Credits	2

COURSE OBJECTIVES:

- To acquaint students with methodology of writing specifications with reference to building trades, materials, workmanship & performance of different items of work.
- To know importance of specifications in contract document for any construction project.

COURSE OUTLINE:

- Techniques, Importance & methods of writing different types of specifications of different items of works in construction.
- Technical and functional role of specifications in any construction project.

Unit I: Specifications

- 1.4. Definition, need & importance of Specification writing
- 1.5. Relation with working drawing, bill of quantities, schedule of rates
- 1.6. Specification as a integral part of contract document

Unit II: Types of Specifications

- 2.1. Basic types like open, closed, restricted etc
- 2.2. Use of manufacturers guide
- 2.3. Combination of above types

Unit III: Specification writing (Workmanship)

- 3.1. Item-wise detailed specifications including methods
- 3.2. Forms of writing descriptive notes on material and workmanship based on working drawing

Unit IV: Specifications for construction works

- 4.2 Demolition work of existing buildings
- 4.2 Formwork

REFERENCE BOOKS

1. Indian Standard specifications
2. C.P.W.D. Specifications and schedule of rates
3. Specification Writing for Architects & Engineers, By Donald A. Watson
4. Specification Writing for Architects & Surveyors, By Arthur J. Wills
5. Estimating, Costing, Specification & Valuation, By M. Chakraborty

ELECTIVE II - DESIGN & TECHNOLOGY ELECTIVE			
Subject Code		4201561(SS)	
Teaching Scheme		Examination Scheme	
Total Contact Periods per week= 2 (lectures=1, Studio=1)	2	Sessional (Internal)	25
		Sessional (External)	25
		Viva (Internal)	NIL
		Viva (External)	NIL
		In-semester exam	nil
		End Semester exam	nil
		Total Marks	50
		Total Credits	1

COURSE OBJECTIVES:

The subject of Electives has been introduced in syllabus with specific intention of study of a particular subject of student's liking in greater detail but in the larger context of overall scope of Architecture syllabus at undergraduate level. This will give students an opportunity to develop their skills in a subject they may opt, to make their career in future.

The Design and technology elective aims at exploring the recent developments in the field of architecture from point of view of building design, services and construction. Aspects such as disaster resistance, accessibility, retrofitting, conservation, architectural design theory, can be addressed through these electives.

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COURSE OUTLINE:

Individual College may offer topics depending upon the availability of experts and resource material. The colleges will have the opportunity to focus on a particular group of topics according to the overall philosophy and mission statement of the College. The probable elective topics are – [the list is only suggestive and individual colleges can frame newer topics which meet the course objectives].

- Universal Design
- Seismic Resistance design
- Services in High rise buildings.
- Design theory
- Architectural Conservation
- Computer & design
- Modular design
- Prefabricated & Precast construction
- Advanced Landscape Design

Note : The topics selected in this elective should not focus on any of the aspects of interior design.

SESSIONAL WORK:

The faculty is expected to set out the broad contour and sub aspects of the particular elective and conduct input and demonstration interactions and define the nature of the sessional work to be done by the students.

The students are expected to present the work done in an **A4 report format of 20 pages**, to include summary of interactions and sessional work prescribed by the faculty with a signed certificate from the concerned Teacher / Expert stating that the study was carried out under his /her guidance and countersigned by the Principal / Academic coordinator.

DRAFT SYLLABUS FOR APPROVAL OF FACULTY

Fourth year 2015 Pattern

Semester VIII

DRAFT SYLLABUS FOR APPROVAL OF FACULTY

DESIGN VIII			
Subject Code		4201562(SV)	
Teaching Scheme		Examination Scheme	
Total Contact Periods per week= 12 (lectures=3, Studio=9)		Sessional (Internal)	100
		Sessional (External)	100
		Viva (Internal)	25
		Viva (External)	25
		In-semester exam	nil
		End Semester exam	nil
		Total Marks	250
		Total Credits	8

Course Objective

Subject aims at preparing the students to handle complex architectural issues at this stage addressing various challenges in terms of scale, complexity of functions, social economic context, traffic and vehicular movement and so on. Along with the challenges of physical issues, students are also now expected to address spatial and visual language of their project with reference to the urban context and setting of their site.

Course Outline [Project type 1 – one of the two options & Project type 2]

1. Study of Urban Areas in terms of Urban level issues like Mobility, movement network, builtform, disposition, character, identity, activities, open space, networks, walkability, inclusiveness, etc.

Community participation initiatives and analysis.

Identify issues related to above aspects at Neighbourhood level and offer design solutions for improving the status of the neighbourhood with reference to the above aspects. Setting up of Guidelines to achieve the master plan objectives and broad implementation strategy to achieve sustainable neighbourhoods.

The project shall include a Study area and Master Plan area of 2- 3 Ha. with detailed Architectural Resolution of a component/s admeasuring not less than 10000 to 20000 sqm Area of Functional space depending on Context and Complexity.

The Architectural project should evolve of the study of the Area and be an outcome of issue formulation, Development Plan proposals for the area if any and a subset of the overall Master Plan for the Area.

OR

1. Multi Functional Complex of Buildings or Speciality Building in an Urban Context with substantial Complexity addressing Issues of Character, Identity, Builtform, Contextuality, Advanced Services, Green Initiatives , landscape integration, traffic management with impact on immediate surroundings, structural resolution in detail. Building Quantum not less than 10000 to 20000 sqm Area of Functional space depending on Context and Complexity and appropriate plot Area. (eg. Healthcare facility, Educational Institution, 5 Star Hotel, Convention Centre, Multimodal Transport Hub, Shopping Mall and Multiplex, redevelopment project etc.).

Project should explore the Impact on the Surrounds and from the Surrounds with reference to the Urban Insert being proposed.

2. One Esquee / Charette be undertaken in each of the Terms (One week Duration) exploring design solution for a project / component , ideas for which would help the Main Design project.

Submissions

The design has to be communicated through architectural graphics, two and three-dimensional sketches, models and narratives.

ADVANCED BUILDING TECHNOLOGY AND SERVICES II			
Subject Code		4201563 (SV)	
Teaching Scheme		Examination Scheme	
Total Contact Periods per week= 07 (lectures=3, Studio=4)	7	Sessional (Internal)	75
		Sessional (External)	75
		Viva (Internal)	25
		Viva (External)	25
		In-semester exam	nil
		End Semester exam	nil
		Total Marks	200
		Total Credits	5

DRAFT SYLLABUS FOR APPROVAL OF FACULTY

COURSE OBJECTIVES:

- To introduce advanced structural systems, materials and services required in buildings with complex and special requirements and enable the students to integrate the same in design.

COURSE OUTLINE:

- Unit 1. Auditoriums - Design and construction of Auditorium of min capacity 500 with provision of a balcony and application of all required services.
All architectural drawings, framing plans and sections, showing all services and constructional detail for balcony [minimum four A1 drawings]
- Unit 2. Construction details of architectural features in design projects.
Assignment -- Complete details with reference to materials used and details of construction. Minimum five working details to an appropriate scale. [Minimum 3 A1 size drawing].
- Unit 3. Introduction to high rise buildings.
Behavior of high rise structures under different loading conditions. Understanding of structural systems for high rise structures. Assignment; Notes and sketches.
- Unit 4 Curtain walls-- Framing systems and construction details for a curtain wall.
Assignment -- Students shall study cases of curtain wall and prepare working details for the same. [minimum one A1 size drawing].

SESSIONAL WORK:

- Drawings / sketches / notes to be as mentioned in the course outline above. Computerized drawings may be allowed only when individual design / detailing is undertaken.

REFERENCE BOOKS

Advance building construction by MACKEY
 High Rise Buildings by JASWANT MEHTA
 Theatres and Auditoriums by Harold Burris- Meyer & Edward Cole.
 Architects Working Details

PROFESSIONAL PRACTICE II			
Subject Code :		4201564 (PP)	
Teaching Scheme		Examination Scheme	
Total Contact Periods per week = 3 [Lecture 1, Studio 2]	3	Sessional (Internal)	Nil
		Sessional (External)	Nil
		In-semester exam	30
		End Semester exam	70
		Total Marks	100
		Total Credits	2

COURSE OBJECTIVES:

- To acquaint the Student with the Role and Stature of an Architect in Society, and understand the duties, responsibilities, liabilities and ethics as a professional.
- To acquaint the Student with the Scope and Avenues of professional Architectural services, and the demands and Mode of professional practice, and to prepare the Student for the professional field.
- To familiarize and prepare the Student with adequate knowledge of an Architect's office administration, documentation and procedures of office and site management to enhance his comprehension and utility during his professional training in the field in Semester IX.

COURSE OUTLINE:

- Unit 1 Introduction to Construction Management - Types and Systems of Tendering - Open and Invited Tenders - Pre-Qualification and Empanelment procedures - Selection of Contractors.
- Unit 2 Introduction to Contracts - Articles of Agreement and Conditions of Contract (IIA document) Contents of a Tender - Terms of Reference - Specifications - Bill of Quantities - Billing, Measurement of work and Payments - Advances and recovery - Bonus and Penalties, etc ..
- Unit 3 Introduction to National Building Code - ISI Codes and Standards, Limits and Tolerances.
- Unit 4 Role of Architects in Construction / Site management - Supervision and monitoring of Speed, Quality and Economy - Status on project sites - Meetings, Minutes, Instructions & Records.
- Unit 5 General Introduction to the Role and Legal duties of Architects in Arbitration and Valuation.

SESSIONAL WORK : Preparation of a JOURNAL with NOTES based upon the syllabus content. Journal to be submitted at the end of Term-II for Internal and External Marking.

REFERENCE BOOKS :

- 1) Handbook of Professional Documents - Council of Architecture publication
- 2) The Architects Act, 1972 - Govt. of India publication

- 3) Professional Practice - By Roshan H. Namavati
- 4) Professional Practice in India - By Madhav G. Deobhakta
- 5) Architectural Practice and Procedure - By Vasant .S. Apte

Urban Studies-II			
SubjectCode		4201565 (SS)	
TeachingScheme		ExaminationScheme	
TotalContact Periodsperweek (lectures=1, Studio=2)	03	Sessional(Internal)	25
		Sessional(External)	25
) Viva (Internal)	nil
		Viva (External)	nil
		In-semester exam	nil
		End Semester exam	nil
		TotalMarks	50
		Total Credits	02

COURSE OBJECTIVES:

- To introduce the students to the process of planning and urban development and associated legislation.
- To introduce the students to urban economics.

COURSE OUTLINE:

- Study of planning process in detail (Survey, analysis, proposals and development)
- Conservation and related Urban Design controls
- Planning and Urban Design legislation- introduction and relevance
- Unified Building bye laws and Development Control rules of local authorities.
- Urban economics: introduction and concepts (demand and supply, housing finance, Government schemes and various bodies etc)

SESSIONAL WORK:

- **Handwritten journal** based upon the theory syllabus as above.
- **Assignments:**
 1. Reading of Urban fabric: Study of existing town and town planning proposals for municipal council level town-(group work) (20 marks)
 2. Identification of urban issues related to various aspects such as environment, society, traffic and transportation, hills and hill slopes, riverfront development, urban heritage conservation through primary surveys(group work in a group of 5 students) (20 marks)
 3. One Tutorial based upon course outline (10 marks)

REFERENCE BOOKS

Urban Pattern: Arthur Gallion
 City in History: Lewis Mumford
 Spreerigen, Paul. Urban Design: **The Architecture of Town and Cities**. Malabar,FL-USAKrieger Publishing Co., 1967
 Lynch, Kevin. **The Image of The City** London: The MIT Press, 1960
 Book of Development Control Regulations by Local Municipal Corporation (latest edition available)
 Book of AITP Exam study material: 'Planning Law and Legislation' by ITPI New Delhi
 Guide to Planning Surveys including Landuse Classification: TCPO, Govt of India: 2004

Housing and Urbanization: Charles Correa
 Garden Cities of Tomorrow: Sir Ebenezer Howard
 Maharashtra Regional and Town Planning Act, 1966
 Traffic and Transportation Planning by L.R. Kadiali

Research in Architecture II			
Subject Code		4201566 (SS)	
Teaching Scheme		Examination Scheme	
Total Contact Periods per week (lectures=1, Studio=2)	3	Sessional (Internal)	25
		Sessional (External)	25
		Viva (Internal)	-
		Viva (External)	-
		In-semester exam	nil
		End Semester exam	nil
		Total Marks	50
		Total Credits	2

COURSE OBJECTIVES:

- To enable students to undertake research focussed on an issue related to the built environment.
- To report research in a technical manner.

COURSE OUTLINE:

- Unit I Data collection and Analysis preferably with use of statistics
- Unit II Presentation of data using various techniques (verbal, visual, graphical, numerical)
- Unit III Technical writing
- Unit IV Presentation of a research paper in form of a seminar

SESSIONAL WORK:

- Tutorial based on units I to III.
- To undertake original research work on the research proposal prepared in Semester VII and report the research in form of a technical paper of 4000 words minimum.

NOTE:

- The guide must have minimum 5 years of teaching experience. Preferably a guide should not guide more than 8 students.
- It is desirable that the research seminar is presented in front of experts.
- It is beneficial to the students if the topic of research is related to the architectural design project of semester X.

REFERENCE BOOKS

Babbie, E. *The Practice of Social Research*. third edition. Belmont: Wadsworth Publishing Co., 1983. book.
 Cresswell, J.W. *Research Design: Qualitative and Quantitative Approaches*. Thousand Oaks: Sage, 1994. Book.

- De Vaus, D.A. *Surveys in Social Research*. Jaipur: Rawat Publications, 2003. Book.
- Dey, I. *Qualitative Data Analysis: A User Friendly Guide for Social Scientists*. London: Routledge, 1993. Book.
- Groat, L. & Wang, D. *Architectural Research Methods*. New York: John Wiley and Sons Inc., 2002. Book.
- Kothari, C.R. *Research Methodology: Methods and Techniques*. New Delhi: Wishwa Prakashan, 2005. Book.
- Michelson, William. *Behavioural Methods in Environmental Design*. Stroudsburg, Pennsylvania: Dowden, Hutchinson and Ross, Inc., 1982.
- Nachmias, C.F. & Nachmias, D. *Research Methods in Social Sciences*. Great Britain: St. Martin's Press Inc., 1996. Book.
- Patton, M.Q. *Qualitative Evaluation Methods*. Newbury Park: Sage Publications, 1980. Book.
- Sanoff, H. *Methods of Architectural Programming*. Vol. 29. Dowden Huthinson and Ross, Inc., 1977. document.
- . *Visual Research Methods in Design*. USA: Van Nostrand Reinhold, 1991.

Quantity Surveying And Estimation - II			
Subject Code		4201567 (PP)	
Teaching Scheme		Examination Scheme	
Total Contact Periods per week (lectures=1, Studio=2)	03	Sessional (Internal)	Nil
		Sessional (External) Viva	Nil
		(Internal)	Nil
		Viva (External)	Nil
		In-semester exam	30
		End Semester exam	70
		Total Marks	100
		Total Credits	2

COURSE OBJECTIVES:

- To enable students in working out quantities for items of plumbing and sanitation work in a structure.
- To enable students in working out quantities of various items of work for an Industrial structure and acquaint them for preparing rate analysis and indent of material.

COURSE OUTLINE:

- Unit I.** Introduction to Analysis of Rate, Factors affecting Rate of any Item of work, Importance of Rate Analysis, Essentials of Rate Analysis.
- Unit II.** Unit Rate, Direct Cost, Indirect Cost, Overhead Charges, Day Work, Task Work, Piece work, Indent of Material,
- Unit III.** Studying and Working out rate Analysis of minimum 20 numbers of standard items of work based on prevailing market rates.
- Unit IV** Studying and preparing Indent of Material of minimum 20 numbers of standard items of work.
- Unit V** Working out quantities for plumbing and sanitation items of work and preparing measurement sheet and abstract for all items of work.

Unit VI Working out quantities for Industrial structure of approximately 200-300 sqm with steel Truss and sheet roofing and preparing measurement sheet and abstract for all items of work.

REFERENCE BOOKS

- *B.I.S 1200- Part-I 1992.* n.d.
- Prof. B.N.Dutta, *Estimating and Costing in Civil Engineering.*
- B.S.Patil. *Civil Engineering Contracts and Estimates.*
- Dr. Roshan Namavati. *Professional Practice.*
- Rangawala. *Estimating Costing and Valuation.*

Specification Writing II			
Subject Code		4201568 (PP)	
Teaching Scheme		Examination Scheme	
Total Contact Periods per week (Lectures = 1 Studio = 2)	3	Sessional (Internal)	nil
		Sessional (External)	nil
		Viva (Internal)	nil
		Viva (External)	nil
		In-Semester exam	30
		End-Semester exam	70
		Total Marks	100
		Total Credits	2

DRAFT SYLLABUS FOR APPROVAL OF FACULTY

COURSE OBJECTIVES:

- To acquaint students with methodology of writing specifications with reference to service installations of different items of work in construction.
- To know importance of specifications in contract document for any construction project.

COURSE OUTLINE:

- Techniques, Importance & methods of writing different types of specifications of different items of works in construction.
- Technical and functional role of specifications in any construction project.

Unit I: Detailed Specifications

- 1.3. Checklist preparation

Unit II: Specification for Building Services

- 2.1. Water Supply & Drainage
- 2.2. Acoustics
- 2.3. Electrification
- 2.4. HVAC installation

Unit III: Building Trades

3.1. Different Building trades scope & contents

Unit IV: Broad outline specification for service installations

- 4.4. Communication systems- elevators, escalators
- 4.5. Accessibility- arrangements for disabled persons
- 4.6. Water proofing- cement, bitumen, polymer based
- 4.7. External development- roads, pavements, kerbs, lighting

REFERENCE BOOKS

- Indian Standard specifications
- C.P.W.D. Specifications and schedule of rates
- Specification Writing for Architects & Engineers, By Donald A. Watson
- Specification Writing for Architects & Surveyors, By Arthur J. Wills
- Estimating, Costing, Specification & Valuation, By M. Chakraborty

ELECTIVE III – ALLIED ELECTIVE			
Subject Code	4201569 (SS)		
Teaching Scheme	Examination Scheme		
Total Contact Periods per week= 2 (lectures=1, Studio=1)	2	Sessional (Internal)	25
		Sessional (External)	25
		Viva (Internal)	NIL
		Viva (External)	NIL
		In-semester exam	nil
		End Semester exam	nil
		Total Marks	50
Total Credits	1		

COURSE OBJECTIVES:

The subject of Electives has been introduced in syllabus with specific intention of study of a particular subject of student's liking in greater detail but in the larger context of overall scope of Architecture syllabus at undergraduate level. This will give students an opportunity to develop their skills in a subject they may opt, to make their career in future.

The allied elective gives opportunity to the students to explore links of design as a faculty with allied fields such as social sciences, visual art, performing arts, psychology, etc.

COURSE OUTLINE:

Individual College may offer topics depending upon the availability of experts and resource material. The colleges will have the opportunity to focus on a particular group of topics according to the overall philosophy and mission statement of the College. The probable elective topics are – [the list

is only suggestive and individual colleges can frame newer topics which meet the course objectives].

- Music and Architecture
- Environmental psychology
- Art movements and Architecture
- Sociology and Architecture
- Building Economics
- Biomimicry

SESSIONAL WORK:

The faculty is expected to set out the broad contour and sub aspects of the particular elective and conduct input and demonstration interactions and define the nature of the sessional work to be done by the students.

The students are expected to present the work done in an **A4 report format of 20 pages**, to include summary of interactions and sessional work prescribed by the faculty with a signed certificate from the concerned Teacher / Expert stating that the study was carried out under his /her guidance and countersigned by the Principal / Academic coordinator.

DRAFT SYLLABUS FOR APPROVAL OF FACULTY