



School of Planning and Architecture, Vijayawada

(An institution of National Importance under the Ministry of Education, Government of India)
Sy.No. 4/4, I.T.I Road, Vijayawada, AP – 520 008

DEPARTMENT OF ARCHITECTURE

Course: Architectural Design – IX (ARC511)

V Yr. IX Sem. B.Arch, 2023-24 A.Y (Sec - A & B)

Contact Hours : 12 (as per Timetable)		Credits : 12
Internal Assessment : 50% External Assessment : 50% (Jury) Total : 100%	Passing Marks : 40% each in Internal assessment & External assessment	Attendance : 75% Minimum
Faculty : Sec A : Vijesh Kumar V, Dr RNS Murthy Sec B : Deepak Kumar, Somaina Islary		
Course Outline : To equip the students with methods of analysis and synthesis of urban setting.		
Course objectives : The objectives of this studio are three fold. <ul style="list-style-type: none">• To understand the complexities of large-scale architectural interventions in specific urban settings, having multiple stakeholders.• To explore how to harmonize and contextualize the architectural design with the immediate built environs and the larger urban fabric.• To sensitize the interface between public and private domain.		
Learning outcome : Students completing this course will be able to: <ul style="list-style-type: none">• Analyze the complexities of large-scale architectural interventions in specific urban settings, having multiple stakeholders• Demonstrate a design scheme which harmonize and contextualize with the immediate built environs and the larger urban fabric Identify the standard codes for Building construction techniques.• Analyze the interface between public and private domain.		

BACKGROUND CONTENT

Issues related to the growing problems of urban areas in third world countries and their future development shall be explored. Emphasis of the studio is to address the interface between public and private realm; and also contextualize their design interventions to the surrounding urban environs. The site analysis and site planning will be carried out at a real life location, considering its locational context, physical features, views, orientation, volumetric analysis and figure ground study of the built-form characteristics, visual imageries, street-scape and skyline analysis; pedestrian, vehicular circulation pattern, and utility networks.

The studies also shall be extended to understand the correlation between, physical, socio-cultural, environmental and socioeconomic dimensions of the built environments, so as to identify opportunities and constrains associated with large-scale urban interventions. Students are then expected to apply this understanding to a realistic site to create physical environments through basic tools of master planning, such as: movement networks, open spaces, suggestive built form, infrastructure network and planning norms.

ASSIGNMENT 1

“AI imagined cities”



Rabindranath Tagore called it “a teardrop on the face of time”. But the Taj Mahal will be half submerged by 2100 if the world does not reach Net Zero by 2050. This is how the Taj will look in 2100 according to Uswitch Ltd, a UK-based price comparison service and switching website (<https://www.uswitch.com/gas-electricity/green-energy/net-zero/>). It used an Artificial Intelligence bot, Midjourney, to imagine 20 famous places around the globe in 2100.

Source: <https://www.downtoearth.org.in/gallery/climate-change/dystopia-ahead-take-an-ai-peek-at-earth-2100-86039>

“First we shape the cities –then they shape us” -Jan Gehl

Our cities were embedded with knowledge and experience of making them inviting for people. People oriented cities started gaining momentum and soon people oriented Urbanism came into light, especially after 2000. For example, Copenhagen has transformed remarkably with respect to its public spaces not only in the Centre of the city but also throughout.

Instruction: The idea is to understand part of your city in comprehension and appreciate the area or neighbourhood using online AI tools (<https://zapier.com/blog/best-ai-image-generator/>). Considering that you have best experienced your city all these years including your childhood. The exercise is not to capture the parts of the city just as a static moment but to represent the dynamism with multiple memories you have gone through various stages.

Objective: To capture the essence of part of your city using AI tools.

Stages:

- I. Describe the city you are most familiar with using not more than 200 to 500 words.
- II. Identify the keywords denoting the nature of your city from stage I.
- III. Generate AI images using the keywords from stage II.
- IV. imagine the same city and its characteristics after 100 years and use AI again to imagine a futuristic scenario.

Time Duration: 2 weeks

Date and marking of submission: 21st July 2023

STUDIO THEME: *Guiding tourism led growth while preserving historical Identity*

Site Location: **Pondicherry (Puducherry), India,**
Proposed Dates for site visit: **26th August - 02nd September 2023**

“We shape cities, and they shape us.” – Jan Gehl

The Union Territory of Puducherry comprises the former French establishments of Puducherry, Karaikal, Mahe and Yanam, which lie scattered in South India. Puducherry, the capital of the Territory was once the original headquarters of the French in India, is situated on the Coromandel Coast of the Bay of Bengal and is about 135 kms. from Chennai Airport. The city provides an approach for conserving and enhancing urban history in a manner that is beneficial to the environment, society, culture, and economics. The main task to identify the urban design tools and techniques which will not just preserve dual character (French and Tamil characteristics of the city) of the city but also enhance it in a setting where the major economy is tourism led.

STRATEGY AND SCOPE OF WORK:

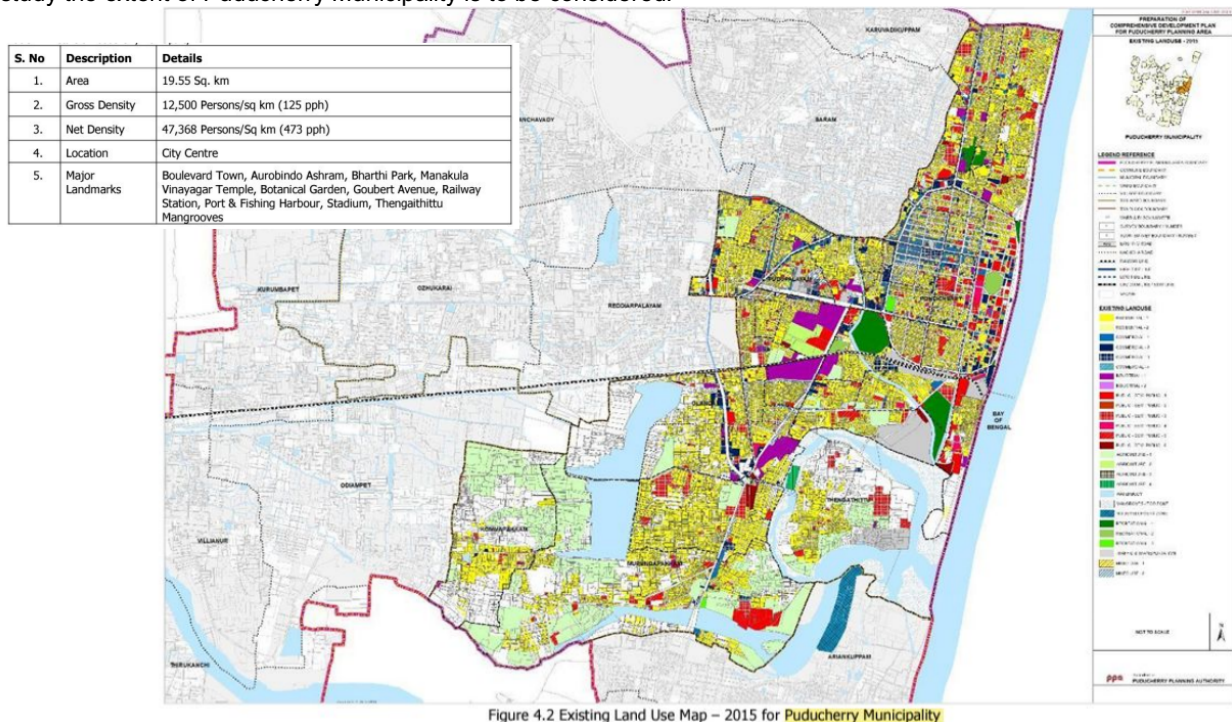
1. **Retrofitting** will introduce planning in an existing built-up area to achieve city objectives to make the existing area more efficient and liveable.
2. **Redevelopment** will effect a replacement of the existing built-up environment and enable co-creation of a new layout with enhanced infrastructure using mixed land use and increased density.
3. **Greenfield** development will introduce most of the sustainable solutions in a vacant area using urban design strategies and architectural interventions.

STUDIO OBJECTIVE

1. Exposing the students to understand the real time complexities and challenges of a heritage city.
2. Understanding the morphology of the area under study in specific cities through various study and analysis.
3. Let the students understand and analyze basic principles of Urban Design and its relationship with Architecture in context with the city being studied.
4. Help the students to identify and focus on issues which can be addressed.
5. Analyzing suitable model of development from Retrofitting, redevelopment and green field development in their area.
6. Importance of community participation, stakeholder engagement and their involvement in the design process.
7. Helping the student to explore how urban design and Architectural design solutions can answer to the issues of water scarcity in identified city.

AREA

For the study the extent of Puducherry Municipality is to be considered.



Source: Comprehensive Development Plan for Puducherry Planning Area – 2036, <https://ppa.py.gov.in/report-comprehensive-development-plan-2036-puducherry-region>, Page 72

STAGES

Stage I: City Level Study

Site survey: introductory checklist (to be done by students in group at both city, area and site level)

1. **Relationship to the city**
Evolution and historic growth
Location Setting and connectivity
Functional Role
Demographic Characteristics
2. **Ecology and Landscape**
Major ecological systems and features at city and area levels
Ecological precincts and components in and around the area
Land profile, topography and characteristics
Open space systems and types
Predominant flora and fauna
MPD references to Ecology and landscape
3. **Transportation and Infrastructure**
Movement network – pedestrian and vehicular
Public transportation systems and networks
Parking characteristics and para transit operations
Transport nodes and terminals
Water supply, drainage, power, telecommunication systems and networks
Sewerage and solid waste disposal systems, waste management
Reference to parking norms, transport network, Infrastructure etc.
4. **Morphology(Group 1)**
Major imageable elements, markers and place of reference
Entry points, movement, corridor and street character
Building types, spatial types
MPD references to Urban form, redevelopment, renewal, conservation etc.
5. **Morphology (Group 2)**
Character zones and precincts, transition areas
Distribution of Built form & open spaces
Structure of public spaces and streets
Architectural expression
6. **Functional structure**
Functional districts and activity areas
Industries and Work places
Wholesale, retail markets and networks
Institutions- educational, religious, social, cultural, etc.
24 Hour activity cycle- distribution, nature and intensity
MPD references to Land use and zoning
7. **Society and culture**
Population characteristics- number, composition, nature of occupation, age, etc.
Social groups, economic & ethnic configuration
Religious affiliation and connected spaces, processional routes and significance
Socio- cultural attributes, communal spaces, festivals & rituals
8. **Planned interventions, regulations and new growth areas with reference to Puducherry**
Statutory bodies, jurisdiction and roles
Master plan, ZDP and major proposals/schemes under MPLAD etc.
Planning norms, development and heritage regulations
Major land ownership
Development trends, private and public.& Future housing and infrastructure requirements

Stage II: Area Level Study:

Site level Study components(on site):

- **Relationship to the city**
Location Setting and connectivity
Functional Role
- **Ecology and Landscape**
Major ecological systems and features at area levels
Ecological precincts(Topography, hydrology etc.) and components in and around the area
Open space systems and types
Predominant flora and fauna
- **Transportation and Infrastructure**
Movement network – pedestrian and vehicular
Public transportation systems and networks
Parking characteristics and para transit operations

Transport nodes and terminals
 Water supply, drainage, power, telecommunication systems and networks
 Sewerage and solid waste disposal systems, waste management

- **Morphology**

Major imageable elements, markers and place of reference
 Entry points, movement, corridor and street character, street section
 Building types, spatial types, Figure ground analysis
 Building Unit typologies, Character zones and precincts, transition areas
 Distribution of Built form & open spaces
 Structure of public spaces and streets
 Architectural expression

- **Functional structure**

Functional districts and activity areas
 Industries and Work places
 Wholesale, retail markets and networks
 Institutions- educational, religious, social, cultural, etc
 24 Hour activity cycle- distribution, nature and intensity

- **Society and culture**

Social groups, economic & ethnic configuration
 Religious affiliation and connected spaces, processional routes and significance
 Socio- cultural attributes, communal spaces, festivals & rituals

Stage III: Analysis of the study, Identifying issues and possible sites for inventions

Stage IV: Proposals

- Overall Vision and Agenda
- Structure Plan proposals
- Final Structure Plan
- Conceptual Design scheme
- Detailed Design scheme
- Detailed model

IMPORTANT DATES


Week	Exercise	Mode of submission	Date
1	AI Imagined Cities	Google Classroom (online) Marks: 5%	Discussion: 14.07.23-21.07.23 Submission: 21.07.2023
2	Introduction to the main studio project & city level documentation of the identified city.	Printed A1 sheets	Discussion 20.07.2023 21.07.2023
3	Progress Review, Finalization of base map and initiation of <u>base model</u>	Printed A1 sheets	Discussion 27.07.2023 28.07.2023
4	Progress Review	Printed A1 sheets Marks: 5%	Discussion 03.08.2023 04.08.2023
5	Review	Printed A1 sheets Marks: 10%	Submission and Review 10.08.2023 11.08.2023
6	Area delineation and preparation of site study and finalization on base model includes contour, waterbodies, vegetation, road network etc. Study Tour dates:	As instructed.	17.08.2023 18.08.2023 24.08.2023 26.08.2023 – 02.09.2023

7	Discussion of site study and documented data, updating of base model & building data	Printed A1 sheets	Discussion 07.09.2023 08.09.2023
8	Review of site study, analysis and model (Stage I)	Printed A1 sheets Marks: 10%	Submission and Mid Semester Review 14.09.2023 15.09.2023
9	Existing area level structure plan and issue identification	Printed A1 sheets	Discussion 21.09.2023 22.09.2023
10	Proposed city level structure plan, Vision statement and identifying zones of intervention	Printed A1 sheets Marks: 20%	Submission and Review 28.09.2023 29.09.2023
12	Conceptual Proposal in smaller sub groups	Printed A1 sheets, Models Marks: 5%	Discussion and review 05.10.2023 06.10.2023
13	Area program, proposed activity and detailed interventions	Printed A1 sheets, Models Marks: 5%	Discussion 12.10.2023 13.10.2023
15	Line scheme drawings and conceptual models of proposals	Printed A1 sheets, Models	Discussion 19.09.2023 20.09.2023 (Dussehra – Holiday)
16	Detailed drawings and detailed models of proposals	Printed A1 sheets, Models Marks: 10%	Submission and Review 26.09.2023 27.09.2023
17	Prefinal	Printed A1 sheets, Models Marks: 5%	Discussion 02.11.2023 03.11.2023
18	Final jury with model	Printed A1 sheets, Models Marks: 15%	Submission and Review 09.11.2023 10.11.2023
19	Submission for External jury	Printed A1 sheets, Models	Submission 16.11.2023 17.11.2023

References:

1. Bacon Edmund, Design of Cities, Thames and Hudson, London, 1974
2. Cliff Moughtin et al (2006): Urban Design Methods and Techniques, Architectural Press, London
3. Correa Charles, The New Landscape: Urbanization in the Third World, Butterworth Architecture 1989
4. De Chiara Joseph ,Panero Julius,Time-Saver Standards for Housing and Residential Development, McGraw-Hill Companies1994
5. Giedion. S, Space Time and Architecture
6. Hall Peter, Cities of Tomorrow, Blackwell publishing
7. Hall, Peter Geoffrey. 1980. Great planning disasters. Berkeley: University of California Press, 1996. Cities of tomorrow. Rev. ed. Oxford, UK: Blackwell.

8. Jacobs, Jane. 1961. The death and life of great American cities. New York: Vintage
9. Jacobs, Jane. 1969. The Economy of Cities. New York: Vintage Press.
10. Kostof Spiro (1992), City Assembled The Elements of Urban Form Through History, Bulfinch Press, 1999
11. Krier Rob, Urban Form and Space, Academy Editions, 1979
12. Lang Jon, The American Experience, Paperback 1994
13. Lang Jon, Urban Design, A Typology of procedures and products, The Architectural Press,2005
14. Lynch Kevin, The Image of the city, MIT Press, 1960
15. Lynch, Kevin, Good City Form, MIT Press, Cambridge MA and London 1984
16. Lynch, Kevin, What Time is this Place?, MIT Press, Cambridge MA 1972
17. Marshall, Stephen. 2009. Cities design and evolution. Abingdon, Oxon ; New York, NY: Routledge
18. Mumford Lewis (1972) The City in History: Its Origins, Its Transformations, and Its Prospects, paperback publishing
19. Rogers, Richard (1998) Cities for a small planet, Icon editions, Paperback publishing, UK.
20. Rossi Aldo, The Architecture of the City, L' Architettura dellaCitta in 1966
21. SchirmbeckEgon, Idea, form and Architecture- Design principles in contemporary architecture
22. Spreiregen Paul D., Architecture of Towns and Cities, Mc.GrawHill Book, Co. 1965.

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	Survey No.4/4, ITI Road, Vijayawada-520008, Andhra Pradesh, India		
Department of Architecture			
Course: ARC512: Dissertation (ARC512)- Jury Course	Class: B. Arch. - Year V Sem IX (2023-24)	Coordinator: Dr. Prashanti Rao	
Credits: 6 (1 lecture +5lab) 2lab hrs - Coordinator 3lab hrs - Guide	Contact Hours of Coordinator per week: 03 hrs (1L +2lab)	Time Table Wednesday, 11:45 AM-12:40 PM 1:20 and 1:30 PM TO 3:20 PM	
Internal Assessment Marks: 50	External Theory Exam: 50	Total Marks: 100	
Min. Attendance: 75%	Min. Marks: 40% both in Internal & External		
Subject Objective:			
<p>The primary objective of this subject is to enable students to establish a strong theoretical foundation and clarity of thought on areas of their interest. It also aims to orient the students to a structured way of collecting the reading materials, taking notes and technical writing, etc. The study process shall enable students to understand the process of conducting a study scientifically, closely following the research methodology. Students may be encouraged to select a topic that may eventually culminate in the form of an architectural thesis in the subsequent semester. Students may choose a topic related to architecture and allied subjects of their interest. Emphasis must be on critical understanding, logical reasoning, and structure writing. Students may be encouraged to select the topic which may eventually culminate in the form of an architectural design thesis in the subsequent semester. Students can thus utilize this as an opportunity for a pre-thesis study, amounting to the literature review and relevant case studies which are otherwise required for the thesis. By the end of the semester, students are expected to submit an article/ paper. Standard referencing and technical writing style must be adhered to. Students are expected to present the progress of the study at various stages of the semester. However, greater weightage will be given to the writing skills and research content of the study.</p>			
Lecture Plan:			
Week No.	Date	Topic (Lecture/ Discussion/ Assignment)	Methodology/ Details
Week 01	19.07.2023	Introduction to technical writing and its essential components required to structure paper. Methods of data (Primary and secondary) collection and representation	Assignment- 1(a) Identification and Selection of a Research Paper which has a specific case related to the interested topic and submit a summary of the research and data collection methodology 1(b)- Submit any three topics for the dissertation as per the interest of the student with Relevance in the next class
Week 02	27.07.2023	(Special Lecture – Prof. Dr. Ramesh SriKonda-on Technical Research Writing)	Refining Topics (any two) for Dissertation -Presentation. Discussion and finalizing the list of topics to circulate within the faculty for guide allotment
Week 03	03.08.2023	Writing Synopsis and Abstract for Dissertation Paper	Discussion on the synopsis prepared by students after the discussion with the Guides and formulation of a Panel discussion with the approval of the Head of Architecture
Week 04	10. 08.2022	Panel Review -1(Topic, Methodology, scope, and limitation)- Synopsis	(Guide marks -5 and Panel marks -10)
Week 05	17.08.2022	Literature Review Methods, Tools, and Ethics (For secondary and Primary Data-Case Studies)	Presentation and Classroom discussion

Week 06		Field Trip -19-08-2023 to 2-09-2023	
Week 07	07.09.2023	Writing Literature Review in Report, the Importance of Referencing and Bibliography And the Importance and Relevance of Plagiarism	Presentation and Classroom discussion
Week 08	13-09-2023 (Mid-Sem Assessment Day)	Mid-Semester Assessment week without suspension of class Panel review-2- Literature Review and Case studies (Desktop and Primary)	Assignment-2 -Panel review (2) Gude Marks -8 Panel Marks -12
Week 09	21.09.2023	Methods to Attempt Analysis - Quantitative and Qualitative for Writing Technical Paper	Presentation and Classroom discussion
Week 10	28-09-2023	Methods to Attempt Analysis Quantitative and Qualitative for Writing Technical Paper	Presentation and Classroom discussion
Week 10	05.10.2022	Difference between Discussion and Conclusion and different methods of Referencing Style	Presentation and Classroom discussion
Week 11	09-10-2023	Special Lecture by -Dr. Vijayalakshmi Iyer	
Week 12	19.10.2023	Discussion on First Draft of Dissertation Report	Classroom discussion
Dusshera Vacation 20.10.2023 to 24.10.2023			
Week 13	26.10.2023	Discussion on First Draft of Dissertation Report	Classroom discussion
Week 14	02.11.2023	Discussion on First Draft of Dissertation Report	Classroom discussion
Week 15	09.11.2023	Panel Review -3 (Full Paper)	Assignment 03 – Full draft Report along with Presentation (5 marks Gude -10 marks Panel)
Week 16	16.11.2023	Panel Review -3 (Full Paper)	Assignment 03 – Full draft Report along with Presentation (5 marks Gude -10 marks Panel)
Week 17	20.11.2023	Draft report Submission	Presentation and Quiz
End of Classes -22.11.2023			
END SEMESTER EXAMINATIONS (4.12.2023- 16.12.2023)			

Learning Outcomes:	
Students shall learn the art of scientific reading, writing, and annotated bibliography. Structuring of a scientific paper, referencing style, paraphrasing, and interpretation of analysis shall be discussed. Copywriting over images/figures, understanding data presentation and tabulation, etc. shall also be discussed.	
References:	
1. Groat, LN., & Wang D., (2013). Architectural Research Methods. John Wiley & Sons. 2. Fraser, M., (2013). Design Research in Architecture: An Overview. Routledge 3. Wiseman, C., (2014). Writing Architecture: A Practical Guide to Clear Communication about the Built Environment. Trinity University Press 4. Borden, I., (2014). The Dissertation: A Guide for Architecture Students. Routledge 5. Sen, I., (2018). 11 Steps to Architectural Thesis. Notion Press	
Dr. Uma Shanker Basina (Head of Department)	Dr. Prashanti Rao (Subject Coordinator)(Sd)



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Survey No.4/4, ITI Road, Vijayawada-520008, Andhra Pradesh, India

Department of Architecture

Course:	ARC513 - Architectural Conservation	Class: B. Arch 4th year, IX Sem A.Y. 2023-24
Instructors:	Ar. Sanjay Bhandari	
Contact Periods/ week:	03 periods.(55 min each) 2 Lecture + 1 Tutorial	
Time Table:	Tuesday (9AM to 11:45 AM)	Credits: 3
Attendance:	Min 75%	

Objective: To equip students to develop initial understanding to record, assess, maintain and manage historic buildings, structures and sites through introduction to various degrees of conservation. To make students aware of the need for precise and ethical conservation knowledge as a basis for conservation related decisions.

LECTURE PLAN

WEEK	TOPIC OF CLASS LECTURE & DISCUSSION	TOPIC OF ASSIGNMENTS / REMARKS
1	Introduction to the course and syllabus overview. Definitions and concepts in conservation.	Lecture
2	Terminologies in conservation, including traditional vocabularies. Historicity, values, authenticity, preservation, restoration, transformation, conservation.	Lecture
3	Introduction to conservation of historic buildings. Interactive session on the history of heritage buildings and cities. Concepts and approaches to conservation in India and other countries.	Lecture + Discussion
4	Conservation as a concept and its background. History of the conservation movement. Comparison of Western and Eastern contexts in conservation.	Lecture + Discussion & Assessment 1
5	Theory and philosophy of conservation. Institutional aspects of conservation.	Lecture
6	Charters, world heritage legislation, and sites. Conservation acts and legislation. Archaeological acts.	Lecture
7	Present context of heritage conservation in India and abroad. Heritage assessment. Conservation area practices.	Lecture + Discussion
8	Adaptive reuse and upgradation programs in old areas. Infill design.	Lecture + Discussion
9	Conservation of traditional water systems. Financing and implementation framework for conservation projects.	Lecture

10	Inventory and documentation techniques. Inspection and survey of historic buildings/monuments.	Lecture
11	Process of identification of heritage assets and methodology of listing. Computer applications in heritage recording and monitoring information systems (MIS).	Lecture
12	Photography, aerial photography, and photogrammetry. Conservation legislation at the national level.	Lecture
13	Legislation pertaining to specific conservation areas. Legislation pertaining to urban conservation programs.	Lecture
14	Community participation in conservation. Government initiatives focusing on holistic development of heritage cities (e.g., HRIDAY).	Lecture + Discussion
15	Case study analysis	Discussion on Assessment 2

Note: Mid-Semester Assessment: Conducted as per the academic calendar, typically between Week 6 or 7, covering the topics covered in Units I and II.

Assignment 1: Case study of a Heritage Building in India, analyzing and assessing its heritage value and historic significance. **(Due in Week 5)**

Assignment 2: Analysis of a heritage conservation initiative in a specific city or region, discussing its impact and lessons learned. **(Due in Week 15)**

S. No.	Stages of Evaluation	Weightage
1	First stage: Assessment –1	10
2	Second stage: Mid-semester Assessment	20
3	Third stage: Assessment –3	20
	Total	50

Course Instructors:

(Ar. Sanjay Bhandari)

Head of Department:

(Dr. Uma Shankar Basina)



School of Planning and Architecture: Vijayawada

Department of Architecture

Course: ARC514 - Urban Design

Class: B. Arch (IX Semester)

Instructor: Mr. Anil Kumar Chilakapati

Contact Periods/week: 3 hours

Internal Assessment Marks: 50

External Assessment (Theory Examination): **50**

Total Marks: 100

Attendance: 75%

Minimum Passing Marks: 50%

Objective: To introduce urban design as a professional discipline situated at the interface between architecture, landscape architecture and urban planning; to sensitise the students about the concept of public realm, understanding of the city as a three-dimensional entity and perception of spaces at multiple scales; familiarize with the implementation processes through various statutory and non-statutory guidelines.

OUTLINE:

Concept of the public realm, understanding of the city as a three-dimensional entity and perception of spaces at multiple scales

STRUCTURE:

The lectures will be organized into three sections, including (1) **why** we need to consider social, environmental and morphological factors in urban design, (2) **what** social and design factors we should consider, and (3) **how** to address these factors in the urban design process. Various types of theories will be discussed, ranging from space–place to linkages.

TEACHING PLAN

Sl. No.	Date	Topic of Class/Lecture & Discussion	Nature of Class
1	Week-1	Introduction to the course <ul style="list-style-type: none">✓ Relationship between Architecture, Urban Design and Town Planning;✓ Warm-up: Presentation of Concepts of Urban design aspects and Case Studies	LECTURE
2	Week-2	Broadly understanding urban forms and spaces at various spatial scales through examples from historic cities.	LECTURE

Sl. No.	Date	Topic of Class/Lecture & Discussion	Nature of Class
3	Week-3	Elements of Urban Design: Understanding the city as a three dimensional element; Urban form as determined by interplay of masses, voids, order, scale, harmony, symmetry, colour and texture, townscape elements and related examples	LECTURE
4	Week-4	Organization of spaces and their articulation in the form of squares, streets, vistas and focal points; Concept of public open space; Image of the city and its components such as edges, paths, landmarks, street features.	LECTURE / EXERCISE
5	Week-5	Typologies and Procedures Concepts of public and private realm; understanding different types and procedures of urban design interventions their scale relationships; constraints and challenges of urban design in democratic versus authoritarian settings.	LECTURE / EXERCISE
6	Week-6	Continuation of Week-5 module	LECTURE
7	Week-7	Slip test and verification of running notes	DISCUSSION
8	Week-8	Urban Design and Sustainability Sustainability concept; Relationship of urban design with economic, environmental and social sustainability;	LECTURE / EXERCISE
9	Week-9	Assessment – MID SEM	Mid term Exam -2
10	Week-10	Urban renewal and urban sprawl; Concepts of Transit Oriented Development, Compact City, Healthy City and Walkable City.	LECTURE / EXERCISE
11	Week-11		LECTURE / EXERCISE
12	Week-12	Urban Design Implementation Urban design and its control; Institutional arrangements for design and planning, their roles, powers and limitations; Types of planning instruments, structure plans sensitivity to open spaces, environmental cognition.	LECTURE / EXERCISE
13	Week-13		LECTURE / EXERCISE

14	Week-14	Conceptual outline theories on: Master plans and local area plans and zoning guidelines, PUD, SEZ; Design communication and role of public participation. Studio component of the semester may be integrated with Architectural Design of the current semester. REVISIONS	LECTURE
15	Week-15		REVISIONS
16	WEEK-16		REVISIONS

Break-up of Internal Assessment Marks

S. No.	Stages of Evaluation	Weightage	Note
1	Assignment - I	25Marks	Total internal marks 50 Attending all the tests / assignments / seminars is mandatory
2	Assignment - II	25 Marks	
3	Assignment - III	50Marks	

Reference Books:

1. BACON, E. N. (1974). Design of cities. London, Thames & Hudson.
2. HALL, P. (1982). Great planning disasters. Berkeley, University of California Press.
3. HALL, P. (2002). Cities of tomorrow: an intellectual history of urban planning and design in the twentieth century. Oxford, UK, Blackwell Publishers.
4. JACOBS, J. (1961). The Death and Life of Great American Cities. Jacobs, Jane. 1969. The Economy of Cities. New York: Vintage Press.
5. KOSTOF, S. (1992). The city assembled: the elements of urban form through history. Boston, Little, Brown.
6. KRIER, R. (1979) Urban Form and Space, Academy Editions.
7. LANG, J. T. (2005). Urban design: a typology of procedures and products. Oxford, Elsevier/Architectural Press.
8. LYNCH, K. (1960). The image of the city. Cambridge, Mass, MIT Press.
9. LYNCH, K. (1972). What time is this place? Cambridge, MIT Press.
10. LYNCH, K. (1981). A theory of good city form. Cambridge, Mass, MIT Press.
11. MARSHALL, S. (2009). Cities design and evolution. Abingdon, Oxon, Routledge.
12. MUMFORD, L. (1961). The city in history: its origins, its transformations, and its prospects. New York, Harcourt, Brace & World.
13. ROGERS, R. G., & GUMUCHDJIAN, P. (1998). Cities for a small planet. Boulder, Colo,

Westview.

14. ROSSI, A. (1995). L'architettura della città. Milano, Città studi.

15. SPREIREGEN, P. D. (1965). Urban design: the architecture of towns and cities. New York, McGraw-Hill.

16. WATSON, D., PLATTUS, A. J., & SHIBLEY, R. G. (2003). Time-saver standards for urban design. New York, McGraw-Hill

(Anil Kumar Chilakapati)
Course Instructor

Head of the Department



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Department of Architecture

Course: ARC514; URBAN DESIGN
Instructors: Dr. G.Kartek

Class: V Yr B. Arch IX Sem A.Y. 2023-24
Internal Assessment: 50
External Jury: 50
Total Marks: 100
Credits: 3

Contact Periods/ week: 3 periods, (studio) 2(Theory)+1(Tutorial)

Time Table: Monday, Sec-A (3 hours)

Attendance: Min 75%

Min. Passing Marks: 50% each in Internal & External Assessment, 40% in Aggregate

Objective:

To introduce urban design as a professional discipline situated at the interface between architecture, landscape architecture and urban planning; to sensitise the students about the concept of public realm, understanding of the city as a three dimensional entity and perception of spaces at multiple scales; familiarize with the implementation processes through various statutory and non-statutory guidelines.

Expected Outcome:

Students completing this course will be able to:

1. Explain the role of urban design as a professional discipline situated at the interface between architecture, landscape architecture and urban planning.
2. Demonstrate their sensitivity towards public realm and understanding of the city as a three dimensional entity and perception of spaces at multiple scales in their design projects.
3. Design architectural projects more contextually and in healthy relationship with neighborhood and city level.

LECTURE PLAN

WEEK	WEEK/DATE	TOPIC OF CLASS LECTURE & DISCUSSION	TOPIC OF STUDIO WORK & ASSIGNMENTS / REMARKS
1	Week-1	Unit I Introduction and Scope Relationship between Architecture, Urban Design and Town Planning	Lecture by Faculty and Tutorial exercise- Reading material - "Image of the City" by Kevin Lynch
2	Week-2	Brief review of the evolution of urban design as a discipline, basic principles and theories	Discussions on Lecture and Tutorial
3	Week-3	Broad understanding of urban forms and spaces at various spatial scales through examples from historic cities.	Submission of Tutorial exercise-I
4	Week-4	Unit II Elements of Urban Design Understanding the city as a three dimensional element; Urban form as determined by interplay of masses, voids, order, scale, harmony, symmetry, colour and texture, townscape elements and related examples	Discussions on Tutorial
5	Week-5	Organization of spaces and their articulation in the form of squares, streets, vistas and focal points;	Lecture and Discussions
6	Week-6	Concept of public open space; Image of the city and its components such as edges, paths, landmarks, street features.	Lecture and Discussions
7	Week-7	Unit III Typologies and Procedures Concepts of public and private realm; understanding different types and procedures of urban design interventions their scale relationships	Lecture and Discussions
8	Week-8	Constraints and challenges of urban design in democratic versus authoritarian settings.	Lecture and Discussions

9	Week-9	Unit IV Urban Design and Sustainability Sustainability concept; Relationship of urban design with economic, environmental and social sustainability	Lecture and Discussions
10	Week-10	Urban renewal and urban sprawl	Lecture and Discussions
11	Week-11	Concepts of Transit Oriented Development, Compact City, Healthy City and Walkable City	Lecture and Discussions
12	Week-12	Group Discussions aligned with Studio work	Discussions on Studio work
13	Week-13	Unit V Urban Design Implementation Urban design and its control; Institutional arrangements for design and planning, their roles, powers and limitations	Lecture and Discussions
14	Week-14	Types of planning instruments, structure plans, master plans and local area plans and zoning guidelines, PUD, SEZ;	Lecture and Discussions
15	Week-15	Design communication and role of public participation.	Submission of Tutorial exercise-I
16	Week-16	Syllabus Revision and Final assessments	Submission of attendance and marks
S. No.			
Stages of Evaluation			
Weightage			
1	Tutorial Exercises & Presentations		25%
	Final internal Evaluation		25%
2	End Semester Examination		50%
	Total		100

Reference Books:

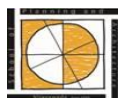
1. BACON, E. N. (1974). Design of cities. London, Thames & Hudson.
2. HALL, P. (1982). Great planning disasters. Berkeley, University of California Press.
3. HALL, P. (2002). Cities of tomorrow: an intellectual history of urban planning and design in the twentieth century. Oxford, UK, Blackwell Publishers.
4. JACOBS, J. (1961). The Death and Life of Great American Cities. Jacobs, Jane. 1969. The Economy of Cities. New York: Vintage Press.
5. KOSTOF, S. (1992). The city assembled: the elements of urban form through history. Boston, Little, Brown.
6. KRIER, R. (1979) Urban Form and Space, Academy Editions.
7. LANG, J. T. (2005). Urban design: a typology of procedures and products. Oxford, Elsevier/Architectural Press.
8. LYNCH, K. (1960). The image of the city. Cambridge, Mass, MIT Press.
9. LYNCH, K. (1972). What time is this place? Cambridge, MIT Press.
10. LYNCH, K. (1981). A theory of good city form. Cambridge, Mass, MIT Press.
11. MARSHALL, S. (2009). Cities design and evolution. Abingdon, Oxon, Routledge.
12. MUMFORD, L. (1961). The city in history: its origins, its transformations, and its prospects. New York, Harcourt, Brace & World.
13. ROGERS, R. G., & GUMUCHDJIAN, P. (1998). Cities for a small planet. Boulder, Colo, Westview.
14. ROSSI, A. (1995). L'architettura della città. Milano, Città studi.
15. SPREIREGEN, P. D. (1965). Urban design: the architecture of towns and cities. New York, McGraw-Hill.
16. WATSON, D., PLATTUS, A. J., & SHIBLEY, R. G. (2003). Time-saver standards for urban design. New York, McGraw-Hill

Course Instructors:

Dr. G.Karteek

Head of Department:

(Dr. Uma Sankar Basina)

**School of Planning and Architecture: Vijayawada**

(An institution of National Importance under the Ministry of Human Resource Development, Govt. of India)
Survey No.4/4, ITI Road, Vijayawada-520008, Andhra Pradesh, India

Department of Architecture**Course:** ARC5110 - Sustainable Architecture**Instructors:** Dr. Lilly Rose A**Class:** V B. Arch IX Sem A.Y. 2023-24**Internal Assessment:** 50**External Theory Exam:** 50**Total Marks:** 100**Credits:**3**Contact Periods/ week:** 03 periods.(55 min each)**Time Table:** Tuesday 09:00am - 11:45pm**Attendance:** Min 75%**Min. Passing Marks:** 40% each in Internal & External Assessment and 40% in Aggregate

Objective: The subject aims in establishing cohesive relation among architecture, technology and sustainability, enabling students to respond effectively to the growing environmental challenges. The course enables the students to develop skills, knowledge and understanding the environmental sustainability construction and building technology, adopting principles and practice of sustainable design that should respond to environmental challenge such as climate change , environmental degradation etc.

Out Line of the Course:**LECTURE PLAN**

WEEK	DATE	TOPIC OF CLASS LECTURE & DISCUSSION	TOPIC OF STUDIO WORK& ASSIGNMENTS / REMARKS
1	Week-1 18-07-2023	Introduction to Sustainable framework - UN convention on climate change, Kyoto protocol, Earth summit.	Lecture
2	Week-2 25-07-2023	Sustainable development-bruntland report, Ethics, visions, definition & concepts	Lecture + inclass activity
3	Week-3 01-08-2023	Social, environmental and economic sustainability	Lecture
4	Week-4 08-08-2023	Sustainability in the built environment and practices in Vernacular Architecture	Lecture + inclass activity
5	Week-5 15-08-2023	Independence Day	Holiday
6	Week-6 22-08-2023	Green materials and their significance in the construction industry and environment	Lecture / Excercises
7	Week-7 29-08-2023	Sustainability in modern construction practices	Lecture + assesment of performance of materials through opaque software
8	Week-8 05-09-2023	Traditional water management techniques and practices with case studies	Lecture + Assignment 1
9	Week-9 12-09-2023	Mid Semsester week	Mid Semsester Examination
10	Week-10 19-09-2023	Ganesh chaturthi	Holiday
11	Week-11 26-09-2023	Sustainable waste management practices with case studies	Lecture
12	Week-12 03-10-2023	Sustainable landscape management at urban scale, werland management	Lecture + inclass activity
13	Week-13 10-10-2023	Green buildings, Life cycle analysis, Carbon footprint	Lecture + Introduction to Seminar topics
14	Week-14 17-10-2023	Green building rating systems in India, LEED, GRIHA and IGBC.	Lecture + inclass activity
15	Week-15 24-10-2023	Dussehra	Holiday

16	Week-16 31-10-2023	Guest Lecture on Green building projects in India	Guest Lecture
17	Week-17 07-11-2023	Assessment of performance of various buildings materials through field measurements	Integration and use of equipments in Climatology lab
18	Week-18 14-11-2023	Sustainable communities and smart cities in India	Lecture
19	Week-19 21-11-2023	Sustainable communities: case study presentations	Seminar

S. No.	Stages of Evaluation	Weightage in %
1	Internal assessment (Class test, Quizzes, assignments, exercises, seminar etc.)	30
2	Mid-semester Examination	20
3	End Semester Examination	50
	Total	100

Reference Books:

1. Cooper, Ilay & Dawson, Barry, Traditional buildings of India, Thames & Hudson, 1998.
2. Jo-Hwa Bay and Boon Lay Ong, Tropical Sustainable Architecture, Social and Environmental Dimensions, Architectural Press, Elsevier, 2006.
3. Farr, Douglas. Sustainable Urbanism: Urban Design with Nature. John Wiley & Sons, 2008.
4. Bajpai, Jitendra N., "Building a foundation for smart Indian cities," published in "Insight", a Journal of Indian School of Business, Hyderabad, April 2015.
5. Mark Roseland, Towards Sustainable Communities: Resources for Citizens and their Governments. Stony Crreek, CT New Society Publishers, 2012. (4th Ed)
6. Jenks Mike, Joan Colin, "Dimensions of the Sustainable City", Springerlink, 2010 (available as an e-book at the Columbia University Library).
7. Slessor, Eco-Tech: "Sustainable Architecture and High Technology", Thames and Hudson 1997.
8. Richard Hyder, "Environmental brief:Pathways for green design", Taylor and Francis, 2007.
9. Brenda and Robert vale, "Green Architecture: Design for a sustainable future", Thames and Hudson 1996.

Course Instructor:

(Dr. Lilly Rose A)

Head of Department:

(Dr.Uma Sankar Basina)



योजना तथा वास्तुकला विद्यालय, विजयवाड़ा

School of Planning and Architecture, Vijayawada

An Institute of National Importance, Ministry of Education Gov. of India

Department of Architecture

Course: Elective: ARC5111 Graphic Design and Product design

Class: 5th Year 9th Sem B Arch

A.Y. 2023 Odd Semester (Sec. A & B)

Instructors: Ar. pushpendra Kumar

Contact Periods/ week : 15 Weeks

Total Marks : 100

Internal Assessment : 50

External Jury : 50

Subject Objective: To equip the students with necessary skills to use design as a tool for cultural enrichment and to make them understand the latest developments in industrial processes as well as the urgent issues concerning technical, manufacturing and marketing aspects of the industrial world of today. Introduce Graphic and Product design and its contribution in improving the quality of human environment with products that are functional and aesthetic.

S. No.	Week	TOPIC OF CLASS LECTURE & DISCUSSION
1	Week 1 (18.07.2023)	Introduction of Product Design
2	Week 2 (25.07.2023)	History and Evolution of Product Design
3	Week 3 (01.08.2023)	Assessment 1: Problem finding in the space
4	Week 4 (08.00.2023)	Assessment 2: Graphic Design
5	Week 5. (05.09.2023)	Graphic Design and Typography Design
6	Week 6 (12.09.2023)	Review : Assessment 2
7	Week 7 (26.09.2023)	Lecture and presentation on Product development
8	Week 8 (03.10.2023)	Prototype Development with concept development
9	Week 9 (10.10.2023)	Review on Assessment 1
10	Week 10 (17.10.2023)	Discussion on Assessemnt 2
11	Week 11 (31.10.2023)	Discussion on Assessemnt 1
12	Week 12 (07.11.2023)	Prototype of Assessment 1 Submission
14	Week 13 (14.11.2023)	Review on Assessment 1
13	Week 14 (21.11.2023)	Submission - Assessment 1
15	Week 15 (28.07.2023)	Submission - Assessment 2

Outcomes:

Students completing this course will be able to:

1. Comprehend the need of the product and the evolution of the product on timeline.
2. Understand visual language and behavior of different fonts used for the branding.
3. Appreciate human ergonomics and anthropometry.
4. Utilise product manufacturing processes and material behavior.

Subject co-ordinators

Head of the Department



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Department of Architecture

Course: ARC5123 -Project Formulation and Financial Modelling	Class: 5 th Yr B. Arch IX Sem. AY 2023-24
Instructor: Dr. Uma Sankar Basina	Internal Assessment: 50
Contact Periods/Wk: 03 periods	External Assessment: 50
Timetable: Monday (1,2,3 periods)	Total Marks: 100
Attendance: Min 75%	Credits: 03
Min. Passing Marks: 50% each in Internal & External Assessment, 50% in Aggregate	

Objective:

The intent of the course is to equip students with an understanding the concepts of project formulation and costing of construction projects. To sensitize the techniques of project appraisal and financial modelling. The course should help in developing the necessary skills and sensitivity towards working in teams and organizations.

LECTURE PLAN

Sl.No.	Week	Topic of Class Lecture & Discussion	Class activities & Assignments
01	Week 1	Introduction to project formulation. Project - Concepts _ Capital investments - generating and screening of Project ideas.	Lecture
02	Week 2	Project identification - Preliminary Analysis, Market, Technical, Financial, Economic, Ecological. Pre-feasibility report and its clearance.	Lecture
03	Week 3	Project Estimates and Techno-Economic Feasibility Report. Detailed Project Report. Different Project Clearances required.	Lecture
04	Week 4	Project costing and Financing. Project Cash-flows. Time Value of Money. Cost of Capital.	Lecture
05	Week 5	Field Visit/Study Tour*	Lecture
06	Week 6	Field Visit/Study Tour*	Lecture
07	Week 7	Project Financing. Means of Financing - Financial Institutions - Special Schemes - Key Financial Indicators - Ratios.	Lecture
08	Week 8	Internal Assessment - 1	Written
09	Week 9	Project Appraisal. Pay-back period - Assessment of various methods. Indian practice of investment appraisal. International practice of appraisal.	Lecture
10	Week10	Analysis of Risk. Different methods - selection of a project and Risk Analysis in practice.	Lecture
11	Week11	Private sector participation in Infrastructure development projects. BOT, BOLT, BOOT.	Lecture
12	Week12	Internal Assessment - 2	Presentation
13	Week13	Technology Transfer and Foreign collaboration. Scope of Technology transfer.	Lecture
14	Week14	Introduction to Financial Modelling. Database functions. Development of Charts, financial functions, creating dynamic models.	Lecture
15*	Week15*	Sensitivity Analysis. Simulation using different statistical distributions used in simulations.	Lecture, Comp. Lab
16*	Week16*	Generating random numbers, building models in finance using simulation.	Lecture
		Internal Assessment - 3	Presentation

*Extra Class

Tentative break-up of internal assessment marks.

S. No.	Category of Evaluation	Marks
01	Internal Assessment 1	10
02	Internal Assessment 2	15
03	Internal Assessment 3	25

Reference Books:

- Gupta, B.L. and Gupta, Amit., Construction Management, Machinery and Accounts, 3rd ed. Standard Pub, 2005.
- Callahan, M. T., Quackenbush, D. G., & Rowings, J. E. (1992). Construction Project Scheduling. McGraw-Hill.
- Chitkara, K. K. (2004). Construction Project Management: Planning, Scheduling and Controlling. Tata McGraw-Hill Education.
- O'Brien, J. J., and Plotnick, F. L. (2009). CPM in Construction Management. McGraw-Hill Professional.
- Punmia, B. C., and Khandelwal, K. K. (2006). Project planning and control with PERT and CPM. New Delhi : Laxmi Publications.
- Wiest, J. D., and Levy, F. K. (1982). A Management Guide to PERT/CPM. New Delhi : Prentice Hall of India.

-Sd-

Dr. Uma Sankar Basina
 Course Coordinator

-Sd-

Dr. Uma Sankar Basina
 Head, Dept. of Arch.



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S.No. 4/4,ITI Road, Near Govt Polytechnic, Vijayawada – Andhra Pradesh, India

Department of Architecture

Course: Entrepreneurship for Architects

Class: VYr B. Arch IX Sem

Instructors: Ar. Madhava Rao T

Internal Assessment: 50

Contact Periods/ week: 05 periods

External Assessment: 50

Time Table: Monday First hour

Total Marks: 100

Attendance: Min 75%

Min. Passing Marks: 40% each in Internal & External Assessment, 50% in Aggregate

Objective:

The objective of the course is to introduce students about the complexities and challenges in an entrepreneurial journey and help them make wise decisions in their respective design professions.

Out Line of the Course:

At the end of the course, the student would be able to:

1. Understand the procedures in setting up an organization.
2. Explore, screen, and conceptualize different innovative ideas.
3. Evaluate & craft business plans and models.
4. Understand models of Finances and funding.
5. Apply for patents and copyrights Intellectual Property rights.

LECTURE PLAN

S. No.	Week	TOPIC OF CLASS LECTURE & DISCUSSION	CLASS ACTIVITIES & ASSIGNMENTS
1	Week 1	Introduction to Entrepreneurship	
2	Week 2	Difference between a Business and Entrepreneurship	
3	Week 3	Types of companies and their registrations and differences	
4	Week 4	Finance and Financial terms like inflation, Savings, Loans etc.	
5	Week 5	Terms related to Businesses - Equity, Startups, IPO, VCs, Ais, License, Royalty	
6	Week 6	Terms related to Businesses - Asset, Liability, Perpetuity etc.	Assignment I
7	Week 7	Types of Business Models	
8	Week 8	Good and Bad Business case studies	

S.No.	Week	Topic	Assessment
9	Week 9		Mid Term Assessment
10	Week 10	Introduction to Design Thinking	
11	Week 11	Double Diamond method, 6 stage design method, Scamper method	Assignment II
12	Week 12	5 Whys method, Root cause analysis, Thinking aloud, Shadowing	
14	Week 13	IPR and Patents. Design and Utility patents	
13	Week 14	Guest Lecture I	
15	Week 15	Good Indian Case studies which applied Design thinking and User centric approach	
16	Week 16	Final Review and Exhibition	

S.No.	Category of Evaluation	Marks	Note
1	Assessment – I:	10	<i>The Marks allotted at each stage is tentative. Categories of evaluation may be increased or decreased (merged) on need-basis</i>
2	Assessment – II:	15	
3	Assessment – III:	25	

Signatures of the Instructors:

Head of the Department: