

Assessment Details (both CIE and SEE)

(methods of CIE need to be defined topic wise i.e.- Studio discussions, Reviews, Time problems, test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 50% marks individually both in CIE and 40 % marks in SEE to pass. Semester End Exam (SEE) is conducted for 100 marks (Viva-voce) and a minimum of 50% (50 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Based on this grading will be awarded.

Continuous Internal Evaluation:

Methods suggested:

1. Studio discussions, Reviews, Time problems, CIE tests, Seminar or micro project, Quiz, report writing etc.
2. The class teacher has to decide the topic for the Design and Seminars if any, in the beginning only. The teacher has to announce the methods of CIE for the subject in advance in writing.

Semester End Examination:

- 1) The student needs to submit his/her works done throughout the semester, including rough sheets for the Viva examination, at least one day prior to the Viva work examination to the course teacher/coordinator.
- 2) The Viva-voce will be evaluated by an external teacher appointed by the University along with Course teacher or an internal examiner.
- 3) The SEE marks list generated is to be signed by both internal and external examiners and submitted to VTU in the sealed cover through the Principal of the institution.

Suggested Learning Resources:

Books:

REFERENCES:

- (a) Donald Watson, "Time Savers Standard for Urban Design", 2005, McGraw Hill.
- (b) Jon Lang , "Urban Design: A Typology of Procedures and Product", 2005, Routledge.
- (c) Edmund Bacon , "Design of Cities", 1976, Penguin Books.
- (d) Gosling and Maitland , "Urban Design", 1984, St. Martin's Press.
- (e) Kevin Lynch , "Site Planning", 1967, MIT Press, Cambridge.
- (f) **Ephemeral Urbanism** - by Rahul Mehrotra (Author), Felipe Vera (Author), Jose Antonio Mayoral.
- (g) **Bombay : The Cities Within** - by Rahul Mehrotra, SharadaDwivedi (Author).
- (h) **The Kinetic City and Other Essays** - by Rahul Mehrotra (Author), Rajesh Vora (Photographer), RanjitHoskote (Foreword), Kaiwan Mehta (Afterword)

Web links and Video Lectures (e-Resources):

- <https://ndl.iitkgp.ac.in>
- <https://www.youtube.com/watch?v=IFjD3NMv6Kw&t=45s>
- <https://www.youtube.com/watch?v=06dV9txztKY>
- <https://www.youtube.com/watch?v=zOnvLr5GaE>
- <https://www.youtube.com/watch?v=dtEhGtq8ycE>
- <https://www.youtube.com/watch?v=40yzE74oKM>
- https://www.youtube.com/watch?v=YoB_uA7z-jk
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Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

Activity 1: A part in whole, whole in part:

“Always design a thing by considering it in its next larger context – a chair in a room, a room in a house, a house in an environment, an environment in a city plan.” — Eliel Saarinen

Reflect on urban design from this perspective and identify the critical components for holistic urban design.

Activity 2: Component of Smart city Mission.

Students will develop an ability to understand ongoing government schemes in few smart cities.

IX Semester

Materials and Methods in Building Construction -VIII

Course Code	21ARC92	CIE Marks	50
Teaching Hours/Week (L:T:P: S)	1:0:0:3	SEE Marks(VIVA)	50
Total Hours of Pedagogy	55	Total Marks	100
Credits	04	Exam Hours	-

Course objectives:

To study contemporary building construction systems, as an integrative discipline, connecting across various technology areas impacting the construction industry. The focus to be on methods, materials and technology prevailing in the industry, with case study examples.

Teaching-Learning Process (General Instructions)

These are sample Strategies, which teacher can use to accelerate the attainment of the various course outcomes.

1. The subject teacher to link the studio work with on site work by arranging site visits in the nearby areas.
2. The subject teacher to highlight the uses of various types of Innovation in building industry

Module-1

Innovations in Construction industry:

1. New directions in Construction Industry: Impact of Automation, Information, Prefabrication, Modular Construction, New Materials, Equipment and Environmental concerns on Building Construction.
2. Special Constructions: Under water constructions, underground constructions, kinetic constructions

<p>High Rise Buildings:</p> <ol style="list-style-type: none"> 3. Form work in High-rise buildings: Issues and Constraints. Materials used; some examples like Maivan, Doka. PERI 4. Enclosure Systems: Types, properties and materials 5. Special and Light Weight materials, eg. Concretes, plastics, recycled or materials out of waste, wood? (Activity 1) 	
Teaching-Learning Process	<ol style="list-style-type: none"> 1. Visit to sites/ factories/showrooms for hands on experience with materials and methods of construction. 2. Document and write a report on high rise buildings and innovation in construction industry. 3. Minimum one plate on each construction topic. Study of material applications in the form of a portfolio.
Module-2	
<p>Technology integration:</p> <p>Influence of Informatics in construction Industry: Big Data, Cloud Collaboration, Information Management, Modelling, Simulation, 3D Printing</p> <p>Construction Equipment: New advances in Construction Equipment</p>	
Teaching-Learning Process	<ol style="list-style-type: none"> 1) Use of theory, activities, sketches, drawings, assignment and tutorial for teaching. 2) Evaluation by quiz, tests, classroom activities.
Module-3	
<p>Retrofit and Repairs:</p> <p>Life Cycle concept of buildings and materials.</p> <p>Repairs: Types of damage to buildings; Types of Repairs used Retrofit: Reuse of buildings, Renovations. (Activity 2)</p>	
Teaching-Learning Process	<ol style="list-style-type: none"> 1) Use of theory, activities, sketches, drawings, assignment and tutorial for teaching. 2) Evaluation by quiz, tests, classroom activities.
Module-4	