

2AR654 Building Construction & Technology VI	L	T	P	C
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Learning Outcome	<ul style="list-style-type: none"> • Students will develop the understanding of advanced building systems • Students will develop the understanding of Earthquake resistance structure • Student will be equipped with Basic understanding of quantity, estimation and costing • Students will understand different types of mechanical circulation systems
Content	<ul style="list-style-type: none"> • Study of Suspended, tensile and tensegrity, space frame, geodesic structure, pneumatic structure structures • Principle of Earthquake resistance structure • Introduction, Different types of estimation techniques • Data require for preparation of estimation • Rate analysis: Purpose, importance & factor affecting rate analysis • General information regarding S.O.R., B.O.Q. & Specifications • Different types of mechanical circulation systems i.e. Escalators, Elevators, Travelator etc. • Different types of ducts & shafts

References:

1. Bachmann, Hugo. Seismic Conceptual Design of Buildings: Basic Principles for Engineers, Architects, Building Owners and Authorities. Kanpur: National Information Centre of Earthquake Engineering, 2003
2. Barrie, Donald S.. Professional Construction Management: Including CM, Design-Construct and General Contracting. New Delhi: McGraw Hill Education India Pvt Ltd, 2013
3. Barry, R. Construction of Buildings Vol - 5: Building Services: Water, Electricity and Gas Supplies Foul Water Discharge, Refuse Storage. New Delhi: Affiliated East-West Press Pvt. Ltd., 1999
4. Barry, R.. Construction of Buildings Vol - 2: Windows, Doors, Fibers, Stairs Finishes. New Delhi: Affiliated East-West Press Pvt. Ltd., 1999
5. Brzev, Svetlana. Earthquake Resistant Confined Masonry Construction. Kanpur: National Information Centre of Earthquake Engineering, 2007
6. Callahan, Michael T.. Construction Project Scheduling. New Delhi: McGraw Hill Education India Pvt Ltd, 2014
7. Chitkara, K. K.. Construction Project Management: Planning, Scheduling and Controlling. New Delhi: Tata McGraw-Hill Publishing Company Ltd., 2011
8. Das, P. K.. Introduction to Seismic Safety in Architecture. Maharashtra: National Institute of Advanced Studies in Architecture (NIASA), COA, 2007
9. Gahlot, P. S.. Construction Planning and Management. New Delhi: New Age International (P) Limited, 2014
10. Hinze, Jimmie. Construction Contracts. New Delhi: Tata McGraw Hill Education Private Limited, 2013
11. McLeod, Virginia. Detail In Contemporary Timber Architecture. UK: Laurence King Publishing, 2010
12. Murty, C. V. R.. Earthquake Design Concepts. Kanpur: National Information Centre of Earthquake Engineering, 2006
13. Murty, C. V. R.. Earthquake Rebuilding in Gujarat: An EERI Recovery Reconnaissance Report. Oakland: Earthquake Engineering Research Institute, 2005
14. Paulson, Boyd C.. Computer Applications in Construction. New Delhi: McGraw Hill Education India Pvt Ltd, 2014
15. Peurifoy, Robert. Estimating Construction Costs. New Delhi: Tata McGraw-Hill Publishing Company Ltd., 2011
16. Peurifoy, Robert L.. Construction Planning Equipment and Methods. New Delhi: Tata McGraw Hill Education Private Limited, 2012
17. Phillips, David. Detail In Contemporary Concrete Architecture. UK: Laurence King Publishing Ltd, 2012
18. Punaima, B. C.. Comprehensive Design of Steel Structures. New Delhi: Laxmi Publications Pvt. Ltd., 2012

19. Rangawala, S. C.. Estimating, Costing and Valuation. Anand: Charotar Publishing House, 2012
20. Ruske, Wolfgang. Timber Construction for Trade, Industry, Administration: Basics and Projects. Switzerland: Birkhauser- Publisher of Architecture, 2004
21. Schacher, Tom. Confined Masonry: For One and Two Storey Buildings in Low Tech Environments: A Guide Book for Technicians and Artisans. Kanpur: National Information Centre of Earthquake Engineering, 2009
22. Guidelines for Earthquake Resistant Non Engineered Construction. Kanpur: National Information Centre of Earthquake Engineering, 2004
23. IITK - GSDMA Guidelines for Seismic Design of Liquid Storage Tanks: Provisions with Commentary. Kanpur: National Information Centre of Earthquake Engineering, 2007
24. IITK - GSDMA Guidelines for Structural Use of Reinforced Masonry: Provisions with Commentary and Explanatory Examples. Kanpur: National Information Centre of Earthquake Engineering, 2007
25. IITK - GSDMA Guidelines for Seismic Evaluation and Strengthening of Buildings: Provisions with Commentary and Explanatory Examples. Kanpur: National Information Centre of Earthquake Engineering, 2007
26. IITK - GSDMA Guidelines for Seismic Design of Earth Dams and Embankments: Provisions with Commentary and Explanatory Examples. Kanpur: National Information Centre of Earthquake Engineering, 2007
27. IITK - GSDMA Guidelines for Seismic Design of Buried Pipelines: Provisions with Commentary and Explanatory Examples. Kanpur: National Information Centre of Earthquake Engineering, 2007