

**L J UNIVERSITY**  
**L J SCHOOL OF DESIGN**  
Syllabus for Bachelors of Design  
First Year I Semester 1

CODE	SUBJECT	CREDIT
10180105	Material and Technology - I	2
<b>AIM</b>		
	To understand basic building materials and construction techniques for building and composite architecture To acquaint with basic building elements	
<b>CONTENT:-</b>		
	<ul style="list-style-type: none"> <li>• Understanding the basic building elements, building materials and construction processes through drawings.</li> <li>• Introduction to the structural and non-structural building elements and vocabulary.</li> <li>• Understanding the Building Elements: <ol style="list-style-type: none"> <li>1. Functions and Design</li> <li>2. Important Building Components</li> <li>3. Foundation, Plinth and Superstructure.</li> <li>4. Typical wall section.</li> </ol> </li> <li>• Study of basic building materials and their properties: Brick, Mud, Stone, Timber, Bamboo, cement, etc.</li> <li>• Study the construction techniques with examples and case-studies of materials like: Brick, Stone, Mud, etc.</li> </ul>	
<b>METHODOLOGY:-</b>		
	<ul style="list-style-type: none"> <li>• Lectures, Studios, drafting, case-studies, sketching, Site visit, Model making, presentation, group work</li> </ul>	
<b>REFERENCE BOOK:-</b>		
	<ul style="list-style-type: none"> <li>• Ash, Ahmed. Materials science in construction: an introduction. London: Taylor &amp; Francis, 2015</li> <li>• Agrawal, B. K.. Introduction to Engineering Materials. New Delhi: Tata McGraw Hill Education Ltd.,2013.</li> <li>• Bhavikatti, S. S.. Materials of Construction Vol - 2. New Delhi: I. K. International Publishing House Pvt. Ltd., 2014</li> <li>• Charleson, Andrew. Structure as architecture: Source book for architects and structural engineers .London: Taylor &amp; Francis, 2015</li> <li>• Gambhir, M. L.. Building Materials: Products, Properties and Systems. New Delhi: Tata McGraw Hill Education Private Limited, 2011</li> <li>• Khurmi, R. S.. Strength of Materials: Mechanics of Solids. New Delhi: S. Chand &amp; Company Ltd.,201</li> </ul>	