

**SCHOOL OF PLANNING AND ARCHITECTURE, VIJAYAWADA
(LECTURE PLAN for A Yr: 2017-18)**

Subject: **Alternative Materials and Technologies (10210205)**

Class: M. Arch, II Semester

Teacher: Nagaraju Kaja
Internal Marks: 50

Dept : Architecture
External Marks: 50

Number of Hours:03
Total Marks: 100

SL.NO	DATE	TOPIC OF CLASS/ LECTURE /DISCUSSION
1	Week 1	Introduction and discussion on basics in Building Materials, Alternative materials
2	Week 2	<ul style="list-style-type: none"> • Background-Need for material science, Materials used in modern construction, performance • Why construction materials important?
3	Week 3	<ul style="list-style-type: none"> • Selection of materials • Considerations • Variability of material parameters
4	Week 4	<ul style="list-style-type: none"> • Amorphous and crystalline structures • Polymers and composites
5	Week 5	Assessment I
6	Week 6	Eco Friendly Building Materials
7	Week 7	Field Trip
8	Week 8	<ul style="list-style-type: none"> • Eco Friendly Building Materials • Environmental impact study of building materials w.r.t composition, production, recycling etc. • Physical properties
9	Week 9	Embodied energy for materials like steel, fly ash bricks, gypsum, steam cured bricks, mud, eco boards etc
10	Week 10	Life cycle Assessment of materials, Sustainable building Technologies
11	Week 11	Internal Assessment II
12	Week 12	Green Materials <ul style="list-style-type: none"> • What is Green? Does it work? • Perceptions about Green materials like cost and life etc. • Indoor Environment and Air quality (IEQ & IAQ)
13	Week 13	Identification of Material categories
14	Week 14	<ul style="list-style-type: none"> • Future of Green Materials • Emerging Pollutants
15	Week 15	Plasticizers (BBP,DEP etc.), Flame retardants, Nano particles
16	Week 16	Revision

17	Week 17	Assessment III
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Tentative Break-up of Internal Assessment:

S.No	Categories of Evaluation	Marks	Note
1	Seminar Presentation 1	20	1. Marks allotted at each stage is tentative 2. New stages or categories of evaluation may be included if and when the need arises
2	Internal test/ Individual Assessment	10	
3	Seminar Presentation 2	20	

References:

(Nagaraju Kaja)