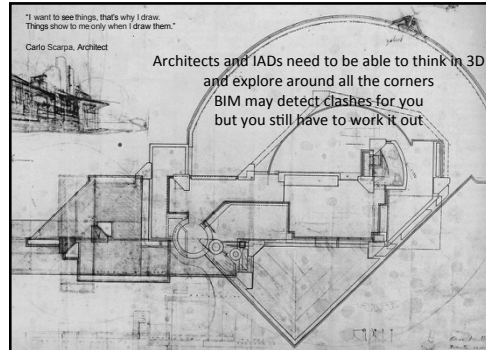
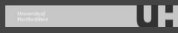


Tech Lecture 1 Introduction to Materials

Advanced Technology Module Code: SCTA1140
Semester A: Weeks 10 - 24
Credits: 15
Module Coordinator: Brian Murphy
Course Leader: Iona Hay
Lecturer: Sonia Tong
Lecture 1: Week 10 3:30-4:30pm
15th October 2019



Introduction to Materials

In line with your first Studio Project, we will briefly examine a few material types;

1. Timber Materials
2. Fired Materials
3. Formed Materials
4. Textile Materials



David Chipperfield, Kleeburg

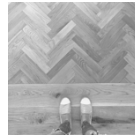
1 Timber Materials

- Hardwood
- Softwood
- Plywood
- Particleboard (Chipboard)
- Oriented Strand Board (OSB)
- Medium Density Fibreboard (MDF)
- Cross Laminated Timber Panels (CLTP)
- Laminated Veneer Lumber (LVL)

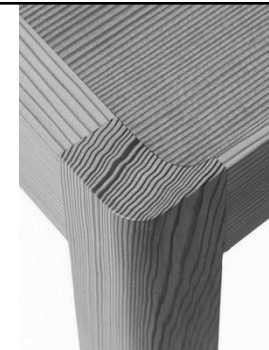


Julius & Mordechai, Munich, 1990-1995

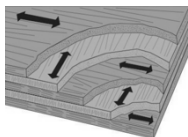
Hardwood



Softwood

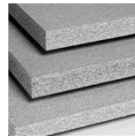


Plywood

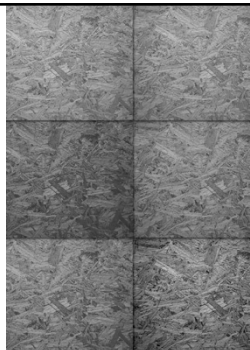


BYPLACE

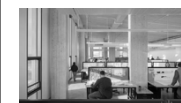
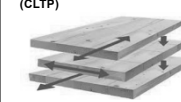
Particleboard (Chipboard)



Oriented Strand Board (OSB)



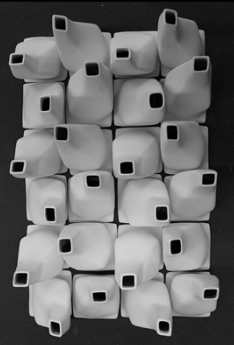
Cross Laminated Timber Panels (CLTP)



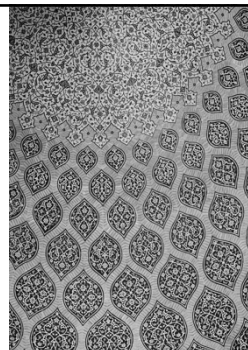
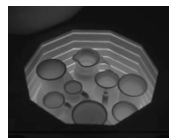
2 Fired Materials

Clay
Ceramics
Porcelain
Terracotta
Bricks

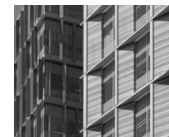
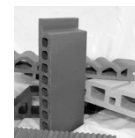
ECALAB prototype
catalytic



Ceramics & Porcelain



Terracotta



Bricks



3 Formed Materials

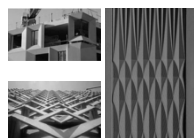
- Concrete
- Plaster
- Cast Glass
- Cast Iron



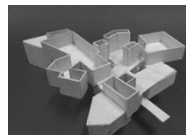
Concrete - In-situ



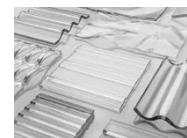
Concrete - Pre-cast



Plaster



Cast Glass



Cast Iron



4 Textile Materials

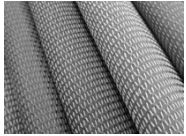
- Tensile
- Fabric
- Carpet
- Cloth
- Woven



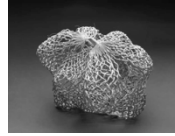
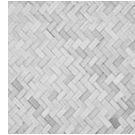
Tensile Fabric



Fabric/Cloth + Carpet



Woven



Technology Task 01: Adopt a Material

Based on your Studio Design Project 1,
'Adopt' a material to study in more detail.

Learning Outcomes:

- Integrate technology into your Studio project through an exploration of design ideas and materials
- Understand impact of chosen material on design proposal
- Place sustainability and green issues at the centre of your design process
- Develop modelling and prototyping skills



MUMA Architects, Storey's Field Centre, Cambridge

Design Task 01: Adopt a Material

Use following headings:

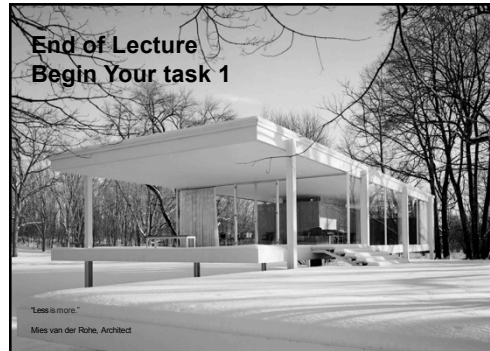
- **How It Is Made**
 - (raw materials growing/extraction, preparation, process, end product, etc.)
- **Inherent Properties**
 - (strengths, weaknesses, construction considerations, etc. ideally tabulated)
- **Sustainability**
 - (sourcing, production process, pollution caused, energy and carbon footprint, recycling, (labelling), etc.)
- **Relevant Precedent Studies**
 - (minimum 5 No. exploring construction principles, typologies, details, etc.)
- **Comparative Qualities**
 - (compare to material from different category: Timber, Fired, Formed, Textile, ideally tabulated for comparisons)
- **Design Process**
 - Studio Design Project 1: record design process, technique, fabrication, etc.)

Link to Brief:
<https://www.studio.com/courses/2014/05/05/adopt-a-material> Page not found

Format:
Report, A4 landscape, bound as a single PDF
Submission:
04/11/2019 before 12 o'clock midnight to Folder



End of Lecture Begin Your task 1



"Less is more."
Mies van der Rohe, Architect