

DAY 1

Section 1: Structure

Molecules and atoms
Primary bonding systems
Secondary bonding systems
Mixtures and solutions in materials
Morphology - crystals and amorphousness
States, compositions and phases
Phase diagrams
Defects in crystals
Solid solutions
Stress
Deformation and its effects on structure
Annealing and its effects on structure

Section 2: Common Processing Techniques

Melting
Rolling
Casting
Annealing
Extrusion
Cooling

DAY 2

Section 3: Properties

Density
Thermal properties
Tensile properties
Other mechanical properties
Optical properties
Diffusion & permeation properties

Section 4: Packaging Materials Overview

Wood
Paper
Paperboard
Plastics
Bio-derived plastics
Foams
Steel
Aluminum