Plastics

Schedule:

Week 1: The concept of polymers and plastics, their classification, types of additives and their purpose of use. The state of world and domestic plastics production and use, prospects.

Week 2: Production, properties and application of polyethylene, polypropylene and their most important copolymers.

Week 3: Polyisobutylene, butyl rubber, thermoplastic elastomers.

Week 4: Polystyrene, polybutadiene and their copolymers (SAN, SBR, NBR and ABS). Their production and use.

Week 5: Chlorine and fluorine-containing polymers (PVC, post-chlorinated PVC, PVDC, PTFE, PTFKE). Possibilities of PVC production.

Week 6: Poly(vinyl acetate), poly(vinyl alcohol) and its derivatives. Poly(vinyl pyrrolidone).

Week 7: Production and properties of the most important polydienes and elastomers (PB, polyisoprene, polychloroprene). Vulcanization.

Week 8: Production and properties of polyacrylates and their derivatives. Production and use of poly(acrylonitrile).

Week 9: Production, properties and use of unsaturated and saturated polyesters and polycarbonates. Alkyd resins.

Week 10: Polyethers (aliphatic, aromatic types). Epoxy resins and their crosslinking.

Week 11: Polyamides and polyimides. Production and properties of phenolic and aminoplasts. Production and use of polyamide-6.

Week 12: Polyurethanes. Silicones. Cellulose derivatives.