

CE689A: Characterization and Use of Aggregates in Pavement Systems

3-0-0-0 [9]

Course Contents:

Aggregate usage, Classification, Aggregate characterization – Physicochemical and Engineering properties; Unbound aggregate bases (UAB) – Permanent deformation, UAB design considerations, Drainage layer; Aggregates in Hot Mix Asphalt (HMA) – Properties, Gradation requirements, Mix design requirements, Fines in HMA; Aggregate in Portland cement concrete (PCC) – Properties, Aggregate concrete interactions, Requirements for mix design; Sub-grade soils – Classification, Characterization; Improving structural properties of unbound layers – Stabilization concepts and methods, Stabilizer selection, Use of traditional stabilizers, Mix design considerations; Use of recycled aggregates in pavement construction