Course Name: Micromechanics of defects in solids

Course Number: 20140

Credit: 3

Course Content (outline):

1. **General theory of eigenstrains:**
   - Definition of eigenstrains, periodic solutions, method of Fourier series and integrals, method of Green’s function, static Green’s function, inclusions and inhomogeneities

2. **Isotropic inclusions:**
   - Eshelby’s solution, interior points, thermal expansion, exterior points, ellipsoidal inclusions with polynomial eigenstrains

3. **Ellipsoidal inhomogeneities:**
   - Equivalent inclusion method