

Department: Civil & Environmental Engineering
Level and Major: Graduate - Environmental Engineering

Division: Civil engineering

Course Title: Fundamentals of advanced and diffusion and pollution modeling

Number of Credits: 3

Prerequisite (Corequisite): Structural analysis (I), Concrete Technology Lecturer: -

Course Topic

- Behavior of transmission and diffusion phenomena in the environment (inphase fluid, opposite inphase ,particles)
- Material relocation(soluble, oil-sediment)in water
- Material relocation(soluble, insoluble)in soil and ground water
- Material relocation(smoke ,dust)in air
- Refers to processes associated with displacement(physical,chemical ,biological)
- Investigate mass equilibrium equations and flow equations
- Investigate displacement equations
- One-dimensional analytical solution of displacement equation(point source, linear source ,combination of sources)
- Familiarity with numerical methods
- Dismantling and solving one-dimensional equations of pure propagation-pure transfer and displacement
- Referring to the relevant points of the two –dimensional and three dimensional- numerical solutions of the displacement equation
- Referring to the models and modeling points of displacement in surface waters
- Referring to the models and modeling points of displacement in soil and ground waters
- Referring to the models and modeling points of displacement in air

Course Description:

Reading Sources:

Course Goals and objectives:

Evaluation:

Course topics:

The course aims t:o