Course Name:
Numerical Methods in Water Engineering

Course Number:
20640

Credit:
3

Course Content (outline):

- Modelling, Numerical model and protocol of numerical simulation
- Characteristics for Partial differential Equations
- Finite Difference Approximations
  - Truncation errors, Consistency, Stability
- Diffusion Equation
  - Alternating Direction Method
- Advection Equation
- Advection-Dispersion Equation
- Open Channel Flow
- Variably Saturated Flow
- Finite element approximations
- Groundwater flow
- Boundary element method
- Shallow water wave

References: