EFDC_Explorer8.2

Advanced Modeling Course Agenda

Hydrothermal Modeling & Water Quality Modeling

05-07, July,2017–DaeJeon, Korea

Note that this training course is Level 2 and assumes a basic understanding of the EFDCPlus/EFDC_Explorer Modeling System. Those people who wish to participate that have never used EFDC_Explorer are encouraged to work through the online video tutorials and example models available on our website. For more information please contact us at: ee_training@ds-intl.biz

Day 1 – Session 1	Welcome, Introduction (Prof.D.Seo&Dr. G. Jung) Introduce EFDC-Explorer (Dr. G. Jung)
Day 1 – Session 2	Water Quality Theory (Prof.D. Seo)
Lunch Break	
Day 1 – Session 3	Introduction to CVL (1.1) (Dr.Y. Jun)
Day 1 – Session 4	Hands on with CVL(1.1) Hydrodynamic Modeling (Dr. Y. Jun)
Day 2 – Session 1	Hands-on with HydrodynamicModel (Dr.Y.Jun)
Day 2 – Session 2	Hands on Water quality Model (Mr. J. Kim)
Lunch Break	
Day 2 – Session 3	Introduction to Coastal Modeling with EE (Dr. Lam) Hands-on building Coastal Model (Dr.Lam)
Day 2 – Session 4	Hands-on with Thermal Diffusion (Dr. Lam)
Day 2 – Session 5	Introduction to EFDC+ SigmaZed Vertical Layering System (Dr. Lam)
Day 3 – Session 1	Hands on with Coastal Model and Thermal Diffusion using Sigma Zed (Dr. Lam)
Day 3 – Session 2	Thermal Diffusion Ports Example (Dr. Lam)
Lunch Break	
Day 3 – Session 3	Estuarine and Coastal Modeling (Prof. J. Kim)
Day 3 – Session 4	Turbulence Theory and Model (Prof. J. Kim)
Day 3 – Session 5	Thermal Diffusion Status and Issue Q & A

Level 2 Hydrothermal Modeling & Water Quality Modeling Course Objectives

Objective 1: Overview of Thermal diffusion and Sigma Zed Model Capabilities

- EFDC+Thermal Diffusion Capabilities,
- EFDC+ Sigma Zed Theory
- Differences between SGZ and Sigma Stretch
- Zonation and Layering Options

Objective 2: Overview of EFDC/EFDCPlusCoastal Modeling Capabilities

- Coastal Modeling Concepts in EFDC
- Setting Harmonic Boundaries in EE and EFDC
- Linking to External Wave Models

Objective 3: Overview of EFDC_Explorer Water Quality Capabilities

- EFDC Water Quality Theory
- EFDC Data Structure, Initial Conditions, Boundary Conditions
- EE User Interface for Water Quality Modeling
- Building and assigning WQ initial and boundary conditions

Objective 4: Hands on Modeling Practice

- Hands on with EFDC_Explorer/ EFDCPlus Modeling System
- Creating models
- Providing solutions to user problems

Objective 5: Overview and Hands On with Grid Building Tool for EFDC

- Key Concepts in Curvilinear Grid Building
- Practical Solutions to Grid Problems using CVLGrid