

8 Functional Areas

34 CODES

ACES is an interactive computer-based design and analysis system in the field of coastal engineering containing eight functional areas.

The original ACES formulation contained only six functional areas and 24 codes (shown in **red**).

Veritech developed all codes shown in blue as a by-product of CEM-PE.

- **Wave Prediction**
- **Wave Theory**
- **Wave Transformation**
- **Structural Design**
- **Wave Runup**
- **Littoral Processes**
- **Inlet Processes**
- **Harbor Design**

Windspeed Adjustment and Wave Growth
Beta-Raleigh Distribution
Extremal Significant Wave Height Analysis
Constituent Tide Analysis
Near-surface wind speeds
Holland Hurricane Model
Linear Wave Theory
Cnoidal Wave Theory
Fourier Series Wave Theory - Fenton
Wave Parameters
Solitary Wave Theory
Linear Wave Theory with Snell's Law
Irregular Wave Transformation - Goda's Method
Combined Diffraction / Reflection by a Vertical Wedge (2)
Breakwater Design Using Hudson Equation
Toe Protection Design
Nonbreaking Wave Forces at Vertical Walls
Rubble-Mound Revetment Design
Irregular Wave Runup on Beaches
Wave Runup / Overtopping on Impermeable Structures
Wave Transmission on Impermeable Structures
Wave Transmission through Permeable Structures
Wave Setup Across Surf Zone
Longshore Sediment Transport - Deepwater Conditions
Longshore Sediment Transport - Breaking Wave Conditions
Longshore Transport using CEDRS / WIS Statistical Data
Beach Nourishment Overfill Ratio
Calculation of Composite Grain-Size Distributions
Simplified Inlet Hydraulics
Wave-current Interaction
Properties of Rectangular Basins
Vessel Generated Waves
Surging of a Moored Vessel