

Classes 11, 12 – Wave mechanics and coastal levees.

Reading: CEM part II chapter 1, pages II-1-5 to II-1-30 (linear theory).

CEM part II chapter 2, pages II-2-43 to II-2-46 (hindcasting).

CEM part II chapter 3, pages II-3-6 to II-3-12 (refraction and shoaling).

CEM part II chapter 4, pages II-4-1 to II-4-5 (breaking).

CEM part VI chapter 5, pages VI-5-5 to VI-5-31 (runup and overtopping).

CEM part VI chapter 5, pages VI-5-50 to VI-5-79 (armor).

- a. Linear wave theory, propagating and standing waves, shoaling, refraction, diffraction.
- b. Wind wave height and period prediction.
- c. Ocean swell estimation – buoy data (i.e. PARI buoys).
- d. Armor sizing for coastal levees.
- e. Overtopping of coastal levees.