DIFFERENCES AND SIMILARITIES BETWEEN NAVAL ARCHITECTURE, NAVAL ENGINEERING AND OCEAN ENGINEERING

Dr. Alan Brown
Professor, Virginia Tech
Ocean Engineering - DEPENDS ON WHO YOU ASK!

• Ocean Engineering has double meaning
  – Broad Umbrella Over All
  – And:

Mixture of marine, civil and mechanical engineering disciplines dealing with the design, analysis and construction of structures in marine environment. It is closely connected to the offshore oil and gas as well as other material recovery and sustainable or green energy; also oceanographic engineering
OTHER DEFINITIONS

NAVAL ARCHITECTURE is an engineering discipline dealing with the design, construction, maintenance and operation of marine vehicles and structures. Naval architecture involves basic and applied research, design, development, design evaluation and calculations during all stages of the life of a marine vehicle.

NAVAL ENGINEERING includes sciences as applied in the research, development, design and construction of military naval surface and subsurface ships, autonomous vehicles and all related systems, onboard and ashore.

MARINE ENGINEERING includes design, construction, maintenance and operation of mechanical, electrical, electronic and fluid systems in/on marine vehicles and structures.
Naval Engineering
Small Ocean Engineering
Big Ocean Engineering
Marine Engineering
Naval Architecture
Naval Engineering
DIFFERENCES IN UNIVERSITY DEFINITIONS

- MIT – big Ocean Engineering; big Naval Engineering (w/2N)
- Virginia Tech – big Ocean Engineering; bigger Naval Engineering
- Michigan – small Ocean Engineering; NA&ME; broadening Naval Engineering
- Texas A&M – small Ocean Engineering