

MTS Research Priorities

- Workforce Development
- Fundamental Research – “Monumental Change”
- Applied Research – “Continuous Improvement”



MISSISSIPPI STATE
UNIVERSITY



NGI
NORTHERN GULF INSTITUTE
a NOAA cooperative institute

Workforce Development

- Education
 - Blue Collar: Community College & Technology
 - White collar: Engineers, Scientists, Managers, ...
- Certification
 - Trades Certification
 - Professional Engineer License
 - Advanced Certification



White Collar Advanced Education

- Multi-modal Transportation Systems
- Design, construction, operations, management & research
- Distance Education & Short Courses for Working Professionals



Certification: Academy of Coastal, Ocean, Ports, and Navigation Engineering

Specialty Certification:

“raises the qualification beyond the PE License”

Four Diplomate Certifications:

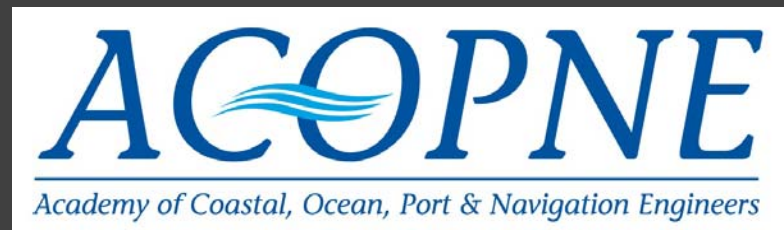
Diplomate, Coastal Engineering (D.CE)

Diplomate, Ocean Engineering (D.OE)

Diplomate, Port Engineering (D.PE)

Diplomate, Navigation Engineering (D.NE)

www.acopne.org

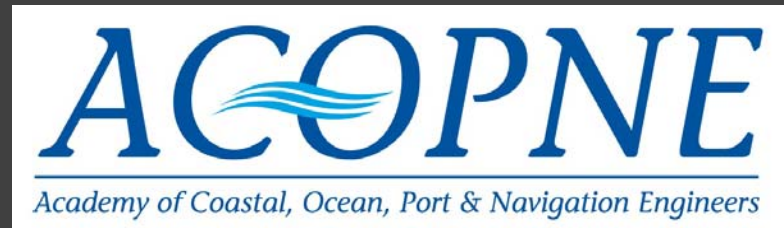


Certification Requirements

- Formal education: Bachelor's degree in engineering, plus 30 additional advanced credit hours
- Licensure as a Professional Engineer (P.E.) or national equivalent
- Additional professional experience beyond the licensure
- Strong professional ethics
- Strong oral and written communications
- Continuing Education: 40 professional development hours in two years, including: 2 hour of ethics training and 2 hours of sustainability

Benefits of Being a Diplomat

- Certification demonstrates mastery of a specialty
- Validates your knowledge, expertise and contributions
- Demonstrates a strong commitment to professionalism through continuing education and ethics requirements.
- Tangible advantage for individuals and organizations



Fundamental Research

Knatz: “Monumental Change”

Douglas Adams - Things invented:

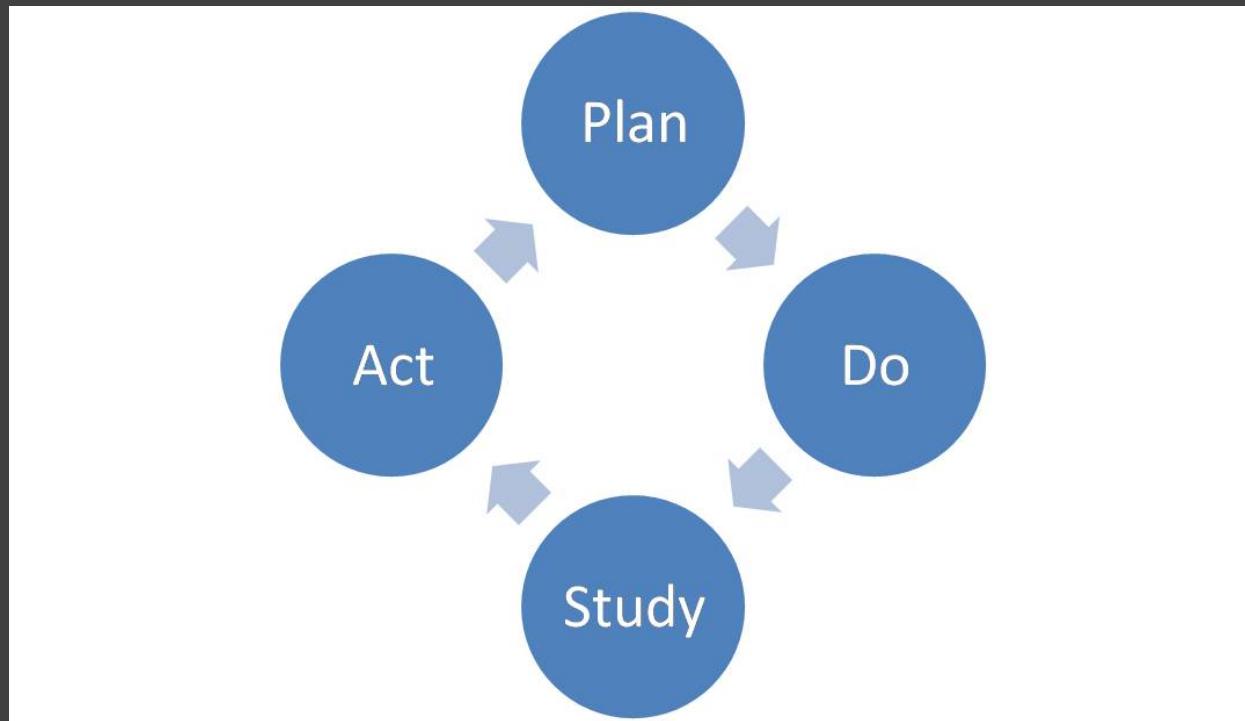
- Before we are 15 years: Part of the natural world
- Between 15 & 35 years: New & exciting challenges
- After 35 years old: Contrary to God’s will



Few people can see that far

Applied Research: Deming's Continuous Improvement

Active User Involvement
Incremental change



Fundamental or Applied?

- Complete Ecosystem Modeling, like Atlantis, forced by water quality and sediment modeling comparable to hydro modeling.
- Economic and social predictive models that show effects of policies and true (unsubsidized) costs of transportation.
- Use of unmanned vehicles and robotics in marine transportation
- Metrics that are truly multi-modal and important, not just those we can measure easily.
- How to teach & support innovation

Contact

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