Why should I major in Ocean Engineering?

Drs. Stefano Brizzolara, Heng Xiao, Christine Gilbert, and Eric Paterson
What is Ocean Engineering?

• [https://www.youtube.com/watch?v=Nst-j4mDlkY](https://www.youtube.com/watch?v=Nst-j4mDlkY)
• [https://www.youtube.com/watch?v=sDgeYfSZdL4&feature=share](https://www.youtube.com/watch?v=sDgeYfSZdL4&feature=share)
What do Ocean Engineers Study?

- Hullform & Stability…

- Hydrodynamics…
What do Ocean Engineers Study?

- Structures...
- Propulsion...
Vehicle Dynamics...

Marine Engineering...
What do Ocean Engineers Study?

or what you are interested in (Undergraduate Research)...

• Many students register for AOE 4994 UG Research every semester, including the summers
• Some students are paid as UG Research Assistants
• Great *hands-on* experience with advanced concepts and technology
What do Ocean Engineers Study?

- among others...

- to produce a complete DESIGN.

- Structures
  - Hydrodynamics
  - Marine Engineering
  - Tech. Electives/Undergrad Research

- Hullform & Stability
  - Senior Design

- Propulsion
  - Ship Dynamics

4 extra classes to double major in AE
Many interesting careers at the *intersection* of AEROSPACE & OCEAN ENGINEERING!

**SAILING AND MOTOR YACHTS**
Design and operation of high-speed boats that harvest energy from the wind, and fly by generating hydrodynamic lift!
OFFSHORE WIND ENERGY
Design and operation of renewable energy machines that operate in the atmosphere and ocean
New, Exciting Developments in OCEAN ENGINEERING!

OCEAN REMOTE SENSING AND EXPLORATION. Engineering and science of obtaining information about the ocean from a distance, typically from aircraft or satellites.
INTELLIGENCE ANALYST
Evaluation of international technology and threats to national security, example: supercavitating 200+ knot rocket-torpedo
This is America’s No. 1 college major for salary and job availability

By Andrew Keshner
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This new ranking takes account of pay, unemployment rate and the need for advanced degrees.

The best majors to go from higher education to ready for hire.

One college major offers smooth sailing above all others for students seeking a secure, well-paying job.

Naval Architecture and Marine Engineering is the most valuable major, according to ranking a ranking of 162 college majors released Monday by personal-finance site Bankrate.com.

Students majoring in the field learn how to design ships and their inner workings, but the study said they’ll also learn not to worry about finding a good job.

Students in other concentrations might end up earning more money, but the study determined that major charted the best course for strong salaries, low unemployment rates and little need for an advanced degree.

Where do Ocean Engineers Work?

OE grads typically go to:

Grad school
- Shipyards
- Engineering Firms
- Shipyards

Navsea
- Huntington Ingalls Industries
- General Dynamics Electric Boat
- Band, Lavis & Associates
- ABS
- MRS
- Office of Naval Intelligence
- Gibbs & Cox, Inc.
Other Job Opportunities: **Oil and Gas**

- **Subsea Factory**
- **Underwater Robotic**
- **FPSO technologies**
- **Dynamics Response of Offshore Structures**
Other Job Opportunities: Renewable Energy
Design teams – extracurricular
Need more information?

Virginia Tech AOE
@VirginiaTechAOE

The deadline to apply for the AOE Alumni Mentoring Program is today, 9/10! The AOE AMP is an exciting opportunity for students to be paired with an alumni mentor in the industry.

Mentors: goo.gl/forms/xhx2GFnu...
Students: goo.gl/forms/dp4BDBXt...

www.aoe.vt.edu