2016 Ocean Sciences Educators’ Retreat

Preparing Ocean Science Grads to Enter the Workforce

Thomas S. Chance, CEO, ASV Global
Personal Background

- Not an Ocean Scientist
- Began a Career in the Ocean at 16 Years Old
- Worked in the Ocean Environment until I was 33
- ...Quit my job
- Started my own Company – C & C Technologies
At C & C Technologies...
Then...

- In 2015, I sold C & C Technologies to Oceaneering
- ...Quit my job
- But I had started ASV Global in 2010
Over the Years, I have Employed...

• Physical Oceanographers
• Marine Geologists
• Marine Geophysicists
• Marine Geotechnical Engineers
• Hydrographers
• Ocean Engineers
• Naval Architects
• Ocean Technicians
Ocean Science Drivers from a Business Standpoint...

- Maslow’s Hierarchy of Needs
  - Eat Today
  - Plan How to Eat Tomorrow

- Ocean Science Grads Must Help their Employer:
  - Plan How to Eat Tomorrow
  1) Catch Fish or
  2) Clean Fish

Win Some Work!

Execute Some Work!
Therefore, Graduate Capabilities Must Include...

• **Master the Science**
  • ...that is Commercially in Demand
  • Also, Less Basic Research / More Applied Research

• **Master Writing Skills**
  • Proposals, Reports, even Emails

• **Master Verbal Skills**
  • Presentations, Informal Discussions
Therefore, Graduate Capabilities Must Include…

• Understand Accounting (at Least Somewhat)
  • Generate Rational Cost Proposals

• Learn Project Management
  • Clean the Fish / Execute the Project – Start to Finish
More Subtle Needs...

- Learn to See the Bigger Picture
  - How does the Effort help the Client
  - Can you Explain it to my Mother?

- Learn to Work with Teams
  - No Primadonnas Allowed
  - Recognize the Value of the Full Spectrum of Team Members

- Go to the Field before you Graduate
  - What you Can and Can’t Do on a Ship
  - Watch some Equipment get Deployed
  - Learn Small Boat Operations

- Know How to Swim
Before Students Graduate, Make them…

- Demonstrate a Well Rounded Ocean Science Understanding
- Submit Some Proposals
- Manage A Project – Start to Finish
- Go to the Field for a Summer
- Work Outside the University for a Summer in Ocean Science
- Work in a Team Environment
- Operate a Screwdriver
Finally, Faculty Should...

• Be Pulled Toward the Market
  • Work with Industry to Understand their Needs
  • Follow the Canadian / European University Model

• Avoid Technology Push
  • Great Key, just have to Find a Lock it Fits!

• Avoid Generation After Generation of...
  • Student to Grad Student to Faculty, then
  • Student to Grad Student to Faculty, then
  • Student to Grad Student to Faculty, then...