MATE Center Update

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Marine Advanced Technology Education (MATE) Center

Knowledge Skill Guidelines: Shawn Smith

- **The MATE Center just published new Knowledge and Skill Guidelines for Oceanographic Instrumentation Technicians**

Internship Program Overview

- **Started with a NSF UNOLS grant in 1999 to fill need for marine technicians**
- **Since 1999, 242 community college and university students have been placed in research vessels, labs and industry settings (148 were placed on UNOLS vessels)**
- **Students demographics over the last 11 years**
  - **48% women and 52% men**
  - **32% ethnic minority participation**

Internship Program Overview

- Intending to host 14-17 interns in 1-8 week internships each summer from 2011-2014

- Recently worked with UNOLS to create an annual 6-month internship on two different vessels
  - Currently reviewing the 30 applications with Alice Doyle and the subcommittee
  - Working with a subcommittee on a set of guidelines for what we expect the intern to gain based on the new KSGs for Oceanographic Instrumentation Technicians

Internship Program Overview

- **Data on 81% of interns as of this fall:**
  - **45% of past interns are continuing their education in a science, technology, engineering or math (STEM) field**
  - **33% are currently working in marine science and technology positions**
  - **15% are working in a STEM field other than marine science/technology**
  - **7% are educators in a STEM subject**

Intern selection process

- **Preference given to technical community college students and marine technology undergraduate students**
  - **53% of interns this year were from community colleges**
- **Interns' interests, knowledge, and skills are carefully matched to mentor requirements**
  - **Mentor receives the 3-5 resumes that best match their needs**
  - **Mentor makes final decision on which student(s) they host**

Knowledge, skills & experience interns gain

- **Job experience essential for employment– often the most important step**
- **Better understand the diversity of ocean careers**
- **Experience with cutting-edge technologies that are not available at their institutions**

2010 Internships

- **14 interns were placed on UNOLS and USCG vessels**
  - ***Cape Hatteras, Endeavor, Oceanus, Pelican, Sharp, Thompson,* and *Walton Smith***
  - ***USCG Healy***
- **3 placed on other research vessels: *E/V Nautilus* and NOAA's *R/V Fulmar***
- **4 women, 13 men; ages 18-50**

Mentor feedback on 2010 interns

- 100% of mentors said the intern made their job easier and they would hire another MATE intern in the future
- 94% were impressed or very impressed with their intern's knowledge and skills
  - Computer skills seemed to be improved in this year's set of interns over past years as 75% of responses indicated excellent or above expectations in this area
  - 100% of mentors said that the intern developed skills that increased their chances of employment in the field
- 100% said the intern was very professional or outstanding
- 88% said would hire the intern immediately in an entry-level position

2010 UNOLS mentors said:

- ***"The program is wonderful. I greatly appreciate the opportunity to have such an intern, and I believe that the interns benefit from the experience as well. It is a win-win situation."***

- ***"I think the program is great, and it speaks for itself: there are (at least) 4 former MATE interns involved with our various projects this year. My experience with this intern has only further solidified my belief that MATE is a wonderful program with a strong presence in the marine engineering community."***

2010 UNOLS mentors said :

- ***"We were short a mooring technician on the cruise. For this reason I asked the intern to assist not only in the CTD work but in the mooring operations. He readily agreed and "wore two hats" throughout the cruise. Both his attitude and effort were outstanding."***

- ***"The intern broadened and deepened his already well developed skill sets. He would make a good addition to any group looking for an entry level technician. "***

Student post-internship survey results

- **100% feel the internship prepared them for future jobs in marine technology**
- **100% said internship was a valuable learning experience**
- **94% have increased confidence in working on technical problems**
- **100% enjoyed working at sea (third year in a row!) and their mentor served as a professional role model for them**

2010 UNOLS interns said:

- ***"The internship made we want to further work on the water with technology, it kind of opened up my mind on what the marine research field had to offer."***

- ***"MATE was a great opportunity to dry run a career. Most people never get that opportunity. In my case, it only served to motivate me even more than I had been before my cruise."***

Students getting hired!

- **4 interns were hired immediately following their internships!**
  - **Nick Short on the *R/V Sharp***
  - **Mike Filimon was hired by the Institute For Exploration to work with them on cruise prep for 2011 and in the "Inner Space Center"**
  - **Evan Johnson worked on the *R/V Thompson* and was hired by one of the PIs to work on shore after the internship**
  - **Russell Rejda stayed an extra month on the *R/V Thompson* to fill a staffing gap**

- **3 others have reported possible job opportunities that have become available because of their internships**

Barriers to Participation Study

In order to better understand the reasons for and solutions to low levels of minority applicants to the MATE Internship Program, we:

- **Completed a set of surveys and focus groups with diverse students at Long Beach City College in 2009**
- **Completed a wider online survey in 2010 of college students in technical programs who attended a presentation on the MATE Internship Program**

Results of First Focus Group

40 LBCC students participated in January 2009

Preliminary Finding of Focus group:

- **Minorities need to SEE themselves in the internship**
- **Need to know students like them have participated**
- **Strong fear of the unknown**
- **Personal relationships play an important role: family, mentors, “Internship Lady”**

Preliminary Survey Results

- **Completed by 120 students at five fairly diverse colleges across the country**

- **Students in underrepresented groups are more strongly influenced by the support of a mentor or instructor than Caucasian students.**
  - **50% of minorities vs. 20% of Caucasians strongly agreed that they would be more likely to apply if a teacher suggested it**

Preliminary Survey Results

- **Strong fears of the unknown. Significantly more minorities stated that the following would prevent them from applying:**
  - **being on a boat**
  - **sleeping in a strange place**
  - **eating different foods than normal**
  - **not knowing how to swim.**

Preliminary Survey Results

- **Much more likely to come from a home where either or both parents have less than a high school education, which limits the options they see for themselves in the future.**

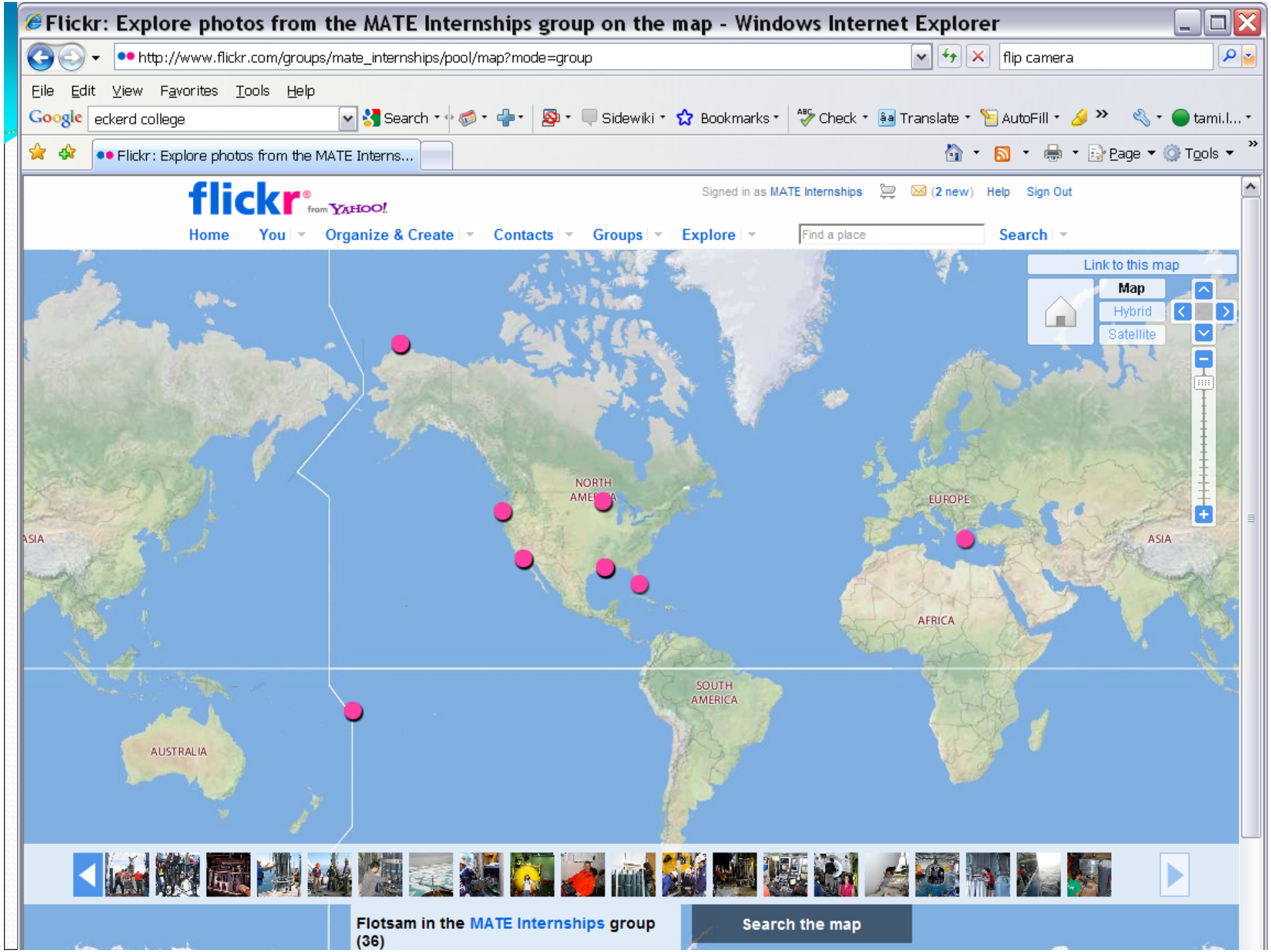
Modifications to internship program as a result of this study

Website modifications

- **Page added with information for families (available in English and Spanish)**
- **Information for prospective students about life on a ship: virtual tours, blogs, photo gallery, Flip videos**
- **More personal “touch” from the Internship Coordinator (photos, first name use, etc.)**
- **Incorporation of past student demographics in presentations posted online**

Website modifications

http://www.marinetech.org/education/internships.php


Flickr: Explore photos from the MATE Internships group on the map - Windows Internet Explorer
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MATE Internships (a group admin) says:
24 Jan 10 - Welcome to the MATE Internships FlickR site! I have posted some photos from the 2009 internships. If you have some great photos from your past internships, please add them and be sure to describe them and include your name and year of internship. Thanks!

Discussion 0 posts | Post a new topic

No topics have been posted yet.

About MATE Internships

The MATE At-Sea Internship Program was created to help prepare students to be competitive and prepared for employment upon graduation. Interns work as marine technicians aboard sea-going research vessels that are part of the University National Oceanographic Laboratory System (UNOLS) and the United States Coast Guard.

Additional Information

This is a **public** group.

- Accepted media types:
  - Photos
  - Video
- Accepted content types:
  - Photos / Videos

Done

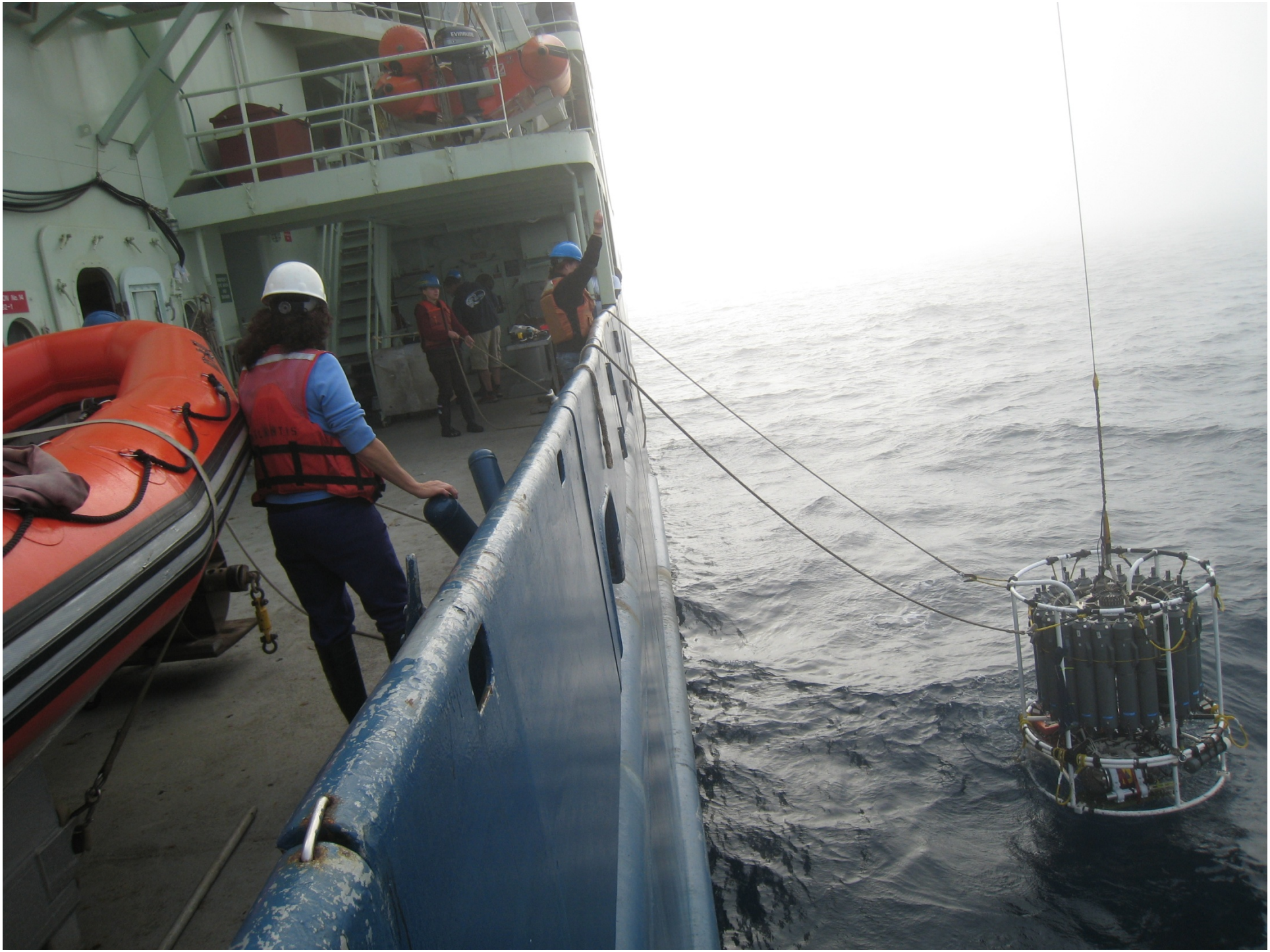
Presentations

- **A new PowerPoint for partner faculty was created and posted online**
  - **Includes demographic information on past interns, photos and first name of internship coordinator, photos of diverse interns**

- **Interns are required to create PowerPoints based on their experience to receive their stipend and are then encouraged and supported to present at their local college**

Ways you can still help us

1. **Please commit to providing internship opportunities as early as possible in 2011 so we can recruit and place the best students.**
2. **When the mentoring guide is released, please read it and share it with mentors. What do you already do to welcome interns?**
3. **Continue to provide your intern with detailed information on the tasks they will have and equipment they will use prior to the internship.**
4. **Use the internship to promote marine technical careers– you are great mentors and role models. THANK YOU!**

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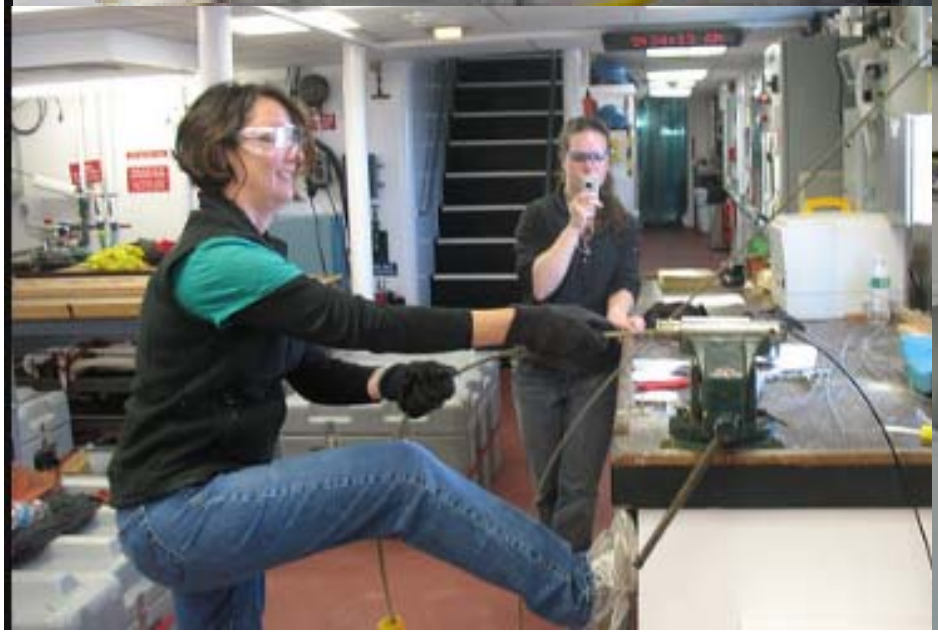


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Future directions

- **The diversity study results will be compiled, analyzed, and published in the next few months**

- **We are awaiting news from NSF on our proposals for continued funding for MATE & the internship program**

For more information visit:

http://www.marinetech.org/careers/internships.php

Or contact:

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