Summit on Improving Geoscience Graduate Student Preparedness for the Future Workforce

Summary & Next Steps

Sponsored by

National Science Foundation
Jackson School of Geosciences
University of Texas at Austin
May 11-13, 2019
Where we started on Saturday

• **Summary on**
  – Future of Undergraduate Geoscience Education
  – Council of Graduate Schools & National Academy of Sciences STEM reports

• **Geoscience Employers Workshop**
  – ~52 participants representing broad spectrum of geoscience employers of PhD & MS students in Earth, Ocean & Atmospheric Sciences
    • Industries, Non-profits, other organizations: Weather/climate, Energy/natural resources, Oceans/fisheries, Environment, Reinsurance/hazards
    • Government agencies – NASA, NOAA
    • Research labs & universities
    • Professional societies

Resulted in:

*General consensus on skills and competencies needed for STEM & Geoscience (Earth, Ocean & Atmospheric Sciences) graduate students*
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Goals:

• Heads, chairs & graduate program administrator discussion
  – skills & competencies that should be part of graduate geoscience education
  – best means of developing these skills & competencies
  – implementation strategies for graduate geoscience programs nationally
Implementation of departmental or program plans

- Barriers, solutions, incentives, rewards
- Develop plans for action
- Implementation into own department curriculum, courses, programs

Time frame to report on progress???
Heads/Chairs/Graduate Program Directors as leaders for change

You can stimulate & shape change:

• Educate your faculty on the skills & competencies graduate students need to be successful in future careers
  – Information from Geoscience Employers Workshop & Summit
• Empower faculty to make curriculum/course/program changes
• Establish academic cultures that
  – reward innovative teaching, mentoring
  – development of professional technical & non-technical skills & competencies
  – are inclusive, equitable and diverse
  – recognize the need for positive mental health
  – provide a holistic education
Future of Graduate Geoscience Education

• **Sustained change in geoscience graduate education** - *Culture change*
  
  – combined efforts of departments and programs
  – administrators, individual faculty
  – future workforce employers
  – geoscience professional societies
Next Steps

• External help needed?
• Unresolved issues?
• What needs to be done next?

Information, talks, broadcasts will be posted:
• http://www.jsg.utexas.edu/events/summit-on-improving-geoscience-graduate-student-preparedness-for-the-future-workforce/
Invitation
Heads and Chairs Workshop on the
Future of Undergraduate Geoscience Education at the
Earth Educators Rendezvous 2019,
July 15-17; Nashville, TN

Thanks!

To Panelists!
Facilitators!
Working Group presenters!
All participants!
NSF!

... and Staff all volunteer help