What are Departments Doing and How are Programs Structured

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A Few Tidbits

• 146 Responding Departments
  • 106 Ph.D. granting
  • 40 Terminal Masters

• Cohorted v. Non-cohorted
  • 85 reported programs are non-cohorted
  • 34 reported programs are cohorted
  • The balance had either a mix or non-distinct response

• Approximately 80% of programs accepted the GRE but did not consider the score in their admissions process
Geoscience Student Enrollment 1956-2018
United States Colleges and Universities

- Undergraduate
- Graduate
U.S. Geoscience Degrees Awarded 1973-2018

- Bachelor's
- Master's
- Doctorate
First Employment of BS Recipients 2013-2017
First Employment of MS Recipients 2013-2017

- State or Local Government
- Research Institute
- Oil and Gas
- Nonprofit/NGO
- Mining
- Federal Government
- Environmental Services
- Construction
- 4-Year University
- 2-Year College
Degrees Offered by Dept Type

- Certificate
- PhD
- MA
- MS
- Other Masters
- PSM

- Doctorate (Cohort)
- Doctorate (Non-cohort)
- Terminal Masters (Cohort)
- Terminal Masters (Non-cohort)
Sources of Department Funding

- NSF
- NOAA
- NASA
- DOE
- NIH
- Extractive Energy Industries
- Renewable Energy Industries
- Minerals Mining Industries
- Environmental Industries
- State Local Government
- Private Foundations
- Other Funding

Percentage of Departments

- Doctorate (Cohort)
- Doctorate (Non-cohort)
- Terminal Masters (Cohort)
- Terminal Masters (Non-cohort)
Advisors and Committees

Require an Advisor Prior to Admission

- Strongly encouraged to have contacted potential advisors prior to admission
- Do not need to have an advisor prior to admission
- Must have an advisor prior to admission
- Other

Require Separate Program and Research Committees?

- Yes
- No
- Other
Online Courses

- Blended
- FullyOnline
- Degree
- No

Legend:
- Doctorate (Cohort)
- Doctorate (Non-cohort)
- Terminal Masters (Cohort)
- Terminal Masters (Non-cohort)
Graduate Assistants per Department

Number of Graduate Assistants

- Doctorate (Cohort)
- Doctorate (Non-cohort)
- Terminal Masters (Cohort)
- Terminal Masters (Non-cohort)
Degree Requirements

- Written Thesis
- Thesis Defense
- Capstone Project
- Internship
- Comprehensive Oral Exam
- Comprehensive Written Exam
- Peer Reviewed Papers

Mandatory, Optional, Not Required

Doctorate (Cohort), Doctorate (Non-cohort), Terminal Masters (Cohort), Terminal Masters (Non-cohort)
How Do you Define Success?

[Bar chart showing distribution of success definitions in different categories like Alumni interactions, Funding, Graduate students, etc.]
What Represents Success of your Students (by Dept)

- Alumni Interactions
- Communication
- Degree Completion
- Employment
- External Reviews
- Funding
- In-Program Assessment
- Profession
- Program Structure
- Publications
- Research
- Teaching
- Other

- Doctorate (cohort)
- Doctorate (non-cohort)
- Terminal Master's (cohort)
- Terminal Master's (non-cohort)
How Students Define a Successful Program

- Communication
- Degree Completion
- Department
- Employment
- Funding
- Other
- Profession
- Publications
- Research
- Teaching

- Doctorate (cohort)
- Doctorate (non-cohort)
- Terminal Master's (cohort)
- Terminal Master's (non-cohort)
Expected Skills at Graduation

- Collaborate with other scientists
- Communicate research to non-scientists
- Make inferences from observations of...
- Critical thinking/problem solving skills
- Data analysis and statistical analysis...
- Field skills & experience during...
- Formal teaching instruction
- Independent project mgmt &...
- Leadership development
- Research skills
- Server-based database use and mgmt
- Technical writing skills
- Technological skills
- Writing for peer-reviewed journals

Doctorate (Cohort)  Doctorate (Non-cohort)  Terminal Masters (Cohort)  Terminal Masters (Non-cohort)
Next Steps

• Looking for feedback on parameters and expected sensitivity
• What are we missing?

• Parametric profiling of departments to identify similar cohorts
• Linking profiles to measured outcomes
For more information

https://www.americangeosciences.org/workforce

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