The Changing Landscape of Geoscience Careers and Education: NEW Online Resources from Building Strong Geoscience Departments

Four New Resource Collections

Geoscience is evolving to meet societal needs. Common trends we see are shifts toward multidisciplinarity, toward collaboration, toward applications of the geosciences to societal issues, and toward a systems approach to Earth Science. There is also a growing emphasis on students’ research, communication, and quantitative analysis skills, and on the ability to use increasingly complex technology and the resulting data sets.

Our new resource collections illustrate the changes taking place in geoscience careers and education and provide examples for departments interested in keeping pace with these changes.

Acknowledgements

These online collections are one facet of the NSF-sponsored Building Strong Geoscience Departments program (NSF grant numbers GEO-0213100, GEO-0451931, GEO-0600260, GEO-0654570, and GEO-0451931). Any opinions, findings, conclusions or recommendations expressed in this poster are those of the authors and do not necessarily reflect the views of the National Science Foundation.

How you can help

We are actively building these collections and welcome suggestions for additions.

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Curricula & Program Profiles

Each of our curriculum and program profiles illustrates how one department is working to stay current with today’s trends in geoscience. Each profile describes a program, its goals, and its context. Curriculum profiles also include course sequencing information.

Course Profiles

Our course profiles show how individual faculty members incorporate what they see as essential knowledge or skills into their department’s curriculum. Each profile describes a course’s context, content, goals, and methods of assessment.

Faculty Profiles

Our faculty profiles describe geoscientists whose work is multidisciplinary, collaborative, has implications for societal issues, or all of the above. Each profile describes that faculty member’s teaching and research.

Employer & Employee Interviews

For our collection of perspectives on geoscience employment, we interviewed several geoscience employers and recently employed geoscience graduates. Each interview focuses on what knowledge, skills, and attitudes employees need to be successful in geoscience careers. While no single perspective can be representative of an entire employment sector, collectively these interviews provide some insights into what our students need to learn to be successful.


Geoscience Hires, 2000

Petroleum industry

Mining industry

Environmental industry

Government

Solid Earth

Earth-surface dynamics

Atmosphere-terrestrial interactions

Environmental & biogeosciences

Materials science

Planetary sciences

Case Studies

Case studies illustrate the development of teaching and research curricula from geoscience departments across the United States. Each case study describes a department and its work in facilitating faculty development, integrating interdisciplinary content into the geoscience curriculum, and providing students with research and problem solving opportunities.

K-12 Teaching & Academia

Other

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