

Synthesis: What needs to change in current curricula?

- Graduate level: 3 year MS option/2 degrees? Courses for grad students and professionals?
- BS level: Develop some computational tools (and some black box), “traditional” classes could have more quantitative emphasis, choice of geoscience tracks, minors, advising, mentoring/research, paid internships, mini-modules, “infrastructure”
- General: backwards design to define goals, faculty professional development, consortia (academic, industry, professional orgs., with help from admin.), team up with faculty from other disciplines to work on interesting research (shows cross-discipline collaboration)

Synthesis: What are the impacts of curricular changes on the mix and support of students?

- Prohibitive costs if need to take pre-requisites or take summer classes
- Emphasize programs' impact on society, support of citizen science, service learning and career viability (internships, alumni visits)
- Highlight computational intensity of field to engage quantitative majors from other disciplines
- Use professional organizations to help link student groups
- Tailoring courses, e-portfolios/certificates for adv. work after employment
- Repetition of concepts
- Reinforcing confidence of students who may not consider themselves quantitatively skilled
- Online teaching of any kind means you will need to invest more in student connections (e.g., study groups)
- Challenges with the high school and 2YC pipelines