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Traditionally, a limited percentage of undergraduate geology students have the opportunity to explore the geology profession in private, non-private industry, city and federal agencies, while a relatively larger number of graduating students pursue higher education to ultimately find a career in academia, city and federal agencies. For the past three semesters, a pilot study that provided more exposure to the geology profession was conducted at the Earth and Physical Sciences Department of the City University of New York. This adaptive teaching approach designated 20% of each upper level geology gateway courses (Structural, Mineralogy, Petrology, Soil Mechanics, and Sedimentation) to the analysis and evaluation of active geological and geotechnical project in New York City (NYC) and adjoining areas. Particularly, the NYC Department of Environmental Protection (NYCDEP)-supported active Green Infrastructure Project became the base of students learning skills concerning project management and assessment aspects. Lectures and online discussions included the project’s cost analysis, participating stakeholders’ priorities, community involvement, feasibility evaluation, scheduled timeline with deliverables, and intended outcomes. Utilizing public information obtained primarily from open access online sources, students explored the benefit of the NYCDEP Green Infrastructure Initiative with emphasis on the successful implementation of integrated water management of urban systems focusing on synergies between drinking water, wastewater, and stormwater management. The product of this teaching approach yielded two unique results. First, more students took interest in seeking a career in field or exploration geology as opposed to academia; secondly, others narrowed the target of their higher education goal to integrate field geology with urban sustainability to achieve maximum effectiveness. Based on a recent GeoSummit (2019), hosted by the Jackson School of Geosciences, University of Texas at Austin, it became quite apparent that many geoscience practioners felt the urgent need to allow students to acquire some training and learning skills involving business management with basic accounting knowledge. Many potential geoscience employers are encouraging students to be familiar with soft skills (social), basic accounting, and training in faculty-led summer research or internships.

2018 – 2020	
Seeking a career in the field of exploration geology	70%
Higher education goal to integrate field geology with urban sustainability (Academic)	30%

Figure 1 – Survey of 22 students

Figure 2– Career Choice Responses (data from Figure 1)

Survey Highlights

Data from 2003-2017 and 2017-2020 suggest a declining interest level to become geoscience educator and an increased desire to pursue field and exploration-based career. Financially disadvantaged and being minorities, our students consider academic track as a long-term process and deem it to be highly competitive. Recent focus on infrastructure development and maintenance of aging infrastructure, urban geology, pollution control and climate-induced adverse phenomena are becoming the focal points for recent geology students to consider field-based track and seek future employments (Figure 1 through 3).

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2003 – 2017		
Field of Exploratio n Geology	City Agency	4%
	Environmental/Engineering Firms	11%
	Exploration	
	Geology (Oil and Gas)	4%
	Federal Government (EPA)	4%
Higher Education & Non-Geology (sub categories)	Graduate School (MS or equivalent, completed or in progress) *Includes 8 students Completed MS and now in teaching profession	31%
	Military/National Guard	4%
	Non Geology (Business, IT, Public Health, Gem inspector)	15%
	Teaching (Adjunct, K9-12 and Substitute Teacher)	26%

Figure 3 – Survey of 73 former students

Figure 4– Currently Employed (data from Figure 3)

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