

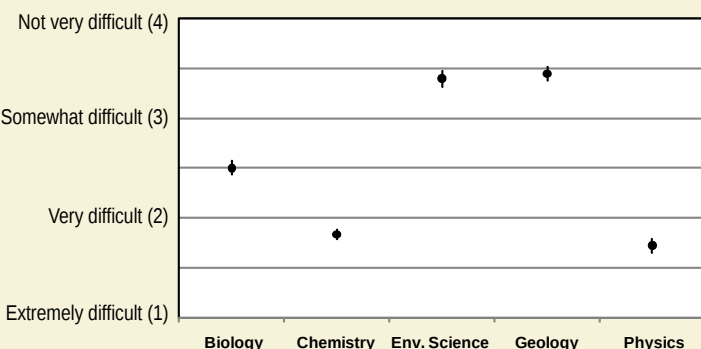
Student Perceptions of Geology and Implications for Choosing Among Different Science Majors

Seven-hundred eighty-three students in introductory geology classes were surveyed at Northern Arizona University during the fall 2008 and spring 2009 semesters to evaluate perceptions and attitudes toward the sciences that are offered as undergraduate degree programs: Biology, Chemistry, Environmental Science, Geology, and Physics.

The results indicate that misperceptions exist regarding the field of geology. Geology was perceived to be low in prestige, low in difficulty and low-paying relative to biology, chemistry, and physics. In addition, geology occupations were perceived to pay less than students' minimum salary expectations. Student perceptions of prestige, difficulty and pay are significantly correlated, with students tending to associate higher pay with greater prestige and difficulty (Hoisch and Bowie, in press).

The data show that the most popular science major at NAU, biology, is in the middle with regard to perceptions of prestige, pay and difficulty. Recruitment of science-inclined students into geoscience degree programs may be aided by providing information to students that corrects the misperceptions, such as salary data that show geoscientists are well paid relative to other science occupations (e.g. Geoscience Currents #24), and information that leads students to have higher and more realistic expectations of the difficulty of the geology degree program.

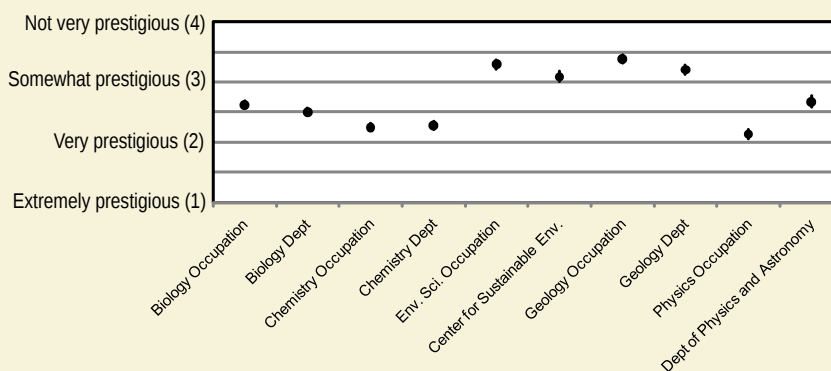
Perceptions of Difficulty of NAU Science Degree Programs



Students perceived geology and environmental science to be lowest in difficulty among the five sciences.

Means and t-tests (95% confidence level) for all responses to the question "Rate the difficulty of each type of academic major at NAU" where the choices were: 1=Extremely difficult, 2=Very difficult, 3=Somewhat difficult, 4=Not very difficult, 5=Not at all difficult. Source: Hoisch and Bowie, in press.

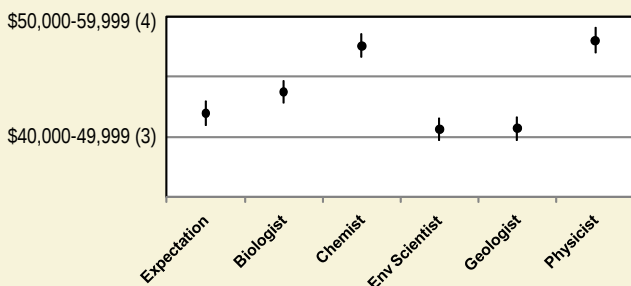
Perceptions of Prestige of the Sciences



Students perceived geology and environmental science occupations to be the least prestigious of the five science occupations, and chemistry and physics to be the most prestigious. Perceptions of prestige of a science and of the NAU academic unit that offers the degree program were strongly correlated.

Means and t-tests (95% confidence level) for all responses to the questions "Rate the prestige of each occupation" and "Rate the prestige of each science department," where the choices were 1=Extremely prestigious, 2=Very prestigious, 3=Somewhat prestigious, 4=Not very prestigious, 5=Not at all prestigious. Source: Hoisch and Bowie, in press.

Perceptions of Entry Level Science Salaries and Minimum Salary Expectations



Students perceived entry level salaries to be lowest for geologists and environmental scientists, and highest for physicists and chemists. They also perceived that geologists and environmental scientists are paid less than their own minimum salary expectations.

According to the National Association of Colleges and Employers, the 2009 starting salaries for bachelor's degree recipients in these occupations is as follows: Biologist: \$33,254; Chemist: \$39,897; Environmental Scientist: \$39,160; Geologist: \$52,770; Physicist: \$51,586.

Means and t-tests (95% confidence levels) for all responses to the questions "Select which income range you think represents the average entry level salary for a graduate with a bachelor's degree in each field," and "Which one of the following describes the minimum entry-level salary you would be satisfied with upon graduating with a bachelor's degree" (labeled "Expectation" on the plot), where the choices were: 1=less than \$30,000, 2=\$30,000-39,999, 3=\$40,000-49,999, 4=\$50,000-59,999, 5=\$60,000-69,999, 6=\$70,000-79,999, 7=>\$80,000. Source: Hoisch and Bowie, in press.

Reference cited: Hoisch, T.D., and Bowie, J.I., in press, Assessing Factors that Influence the Recruitment of Majors from Introductory Geology Classes at Northern Arizona University: Journal of Geoscience Education.

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