

Notes on Utilizing Alumni Surveys for Assessment  
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1. Background:
  - a. Engineering began using these instruments in the late 1990's
  - b. ABET, our accreditation agency, required several new things in their new outcomes-base accreditation
    - i. Define student outcomes (skills/characteristics at graduation time)
      1. an ability to apply knowledge of mathematics, science, and engineering
      2. an ability to design and conduct experiments, as well as to analyze and interpret data
      3. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
      4. an ability to function on multi-disciplinary teams
      5. an ability to identify, formulate, and solve engineering problems
      6. an understanding of professional and ethical responsibility
      7. an ability to communicate effectively
      8. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
      9. a recognition of the need for, and an ability to engage in life-long learning
      10. a knowledge of contemporary issues
      11. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice
      12. a knowledge of chemistry and calculus-based physics
      13. an ability to apply multivariate calculus and differential equations, and a familiarity with statistics and linear algebra, to solve mechanical engineering problems
      14. an ability to apply principles of engineering, science and mathematics to the design and realization of physical systems
      15. an ability to work professionally in both thermal and mechanical systems
    - ii. Define Program Educational Objectives (characteristics our graduates should have 3-5 years after graduation)
      1. be valued members of their organizations because of their skills and abilities as mechanical engineers;
      2. solve complex technical problems and/or design systems that are useful to society by applying the fundamental



- iii. Can possibly fit alum survey into other engagements you might have with the alums, say an annual dinner or awards ceremony, etc.
- b. A downside is that some alums are turned off when being asked to complete long surveys. A disgruntled alum is not some we strive for.