



Global Learning in Engineering – Industry Perspective

NAFSA Global Learning
Colloquium on STEAM'D

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& Board Operations



Topics

- Who is ABET?
- Need for Global Learners & Professionals
- Industry Perspective



Who Is ABET?



ABET Core Purpose

With ABET accreditation, students, employers, and the society we serve can be **confident** that a program meets the quality standards that produce graduates prepared to enter a global workforce.

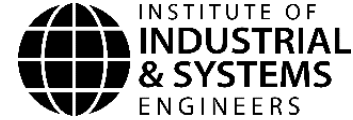


Value Proposition

Our approach, the criteria and processes we use, and the quality we guarantee ***inspire confidence*** in the programs we accredit, whose graduates are building a ***world that is safer, more efficient, more comfortable and more sustainable***

ABET Organizational Design

- ABET is a federation of 35 professional and technical societies
 - Peer review process
 - Team Chairs & Program Evaluators come from our societies
 - Develop program criteria
 - Appoint Board members and Accreditation Experts
- ABET relies on the services of almost 2,200 volunteer experts supported by 32 full-time and 14 part-time staff



ABET's 35 Member Societies





US Army Corps
of Engineers®



Newport News
Shipbuilding



**PARSONS
BRINCKERHOFF**



NORTHROP GRUMMAN



AREVA

Industry Partners



Sandia
National
Laboratories

SIEMENS



McKIM & CREED

AECOM



BOEING





ABET's Global Engagement



Global Engagement

- Memoranda of Understanding (MOU)
 - 18 international accreditors
- Mutual Recognition Agreements
 - Canada; Washington, Sydney, Dublin, Seoul Accords
- Accredited Programs
 - 3,709 Programs at 752 Institutions in 30 Countries
- Engagement with global education organizations
 - Intl Federation of Engineering Societies (IFEES)
 - Global Engineering Deans Council (GEDC)
 - Latin American and Caribbean Consortium of Engineering Institutions (LACCEI)

Are we preparing our graduates to succeed in a global economy?



Globalization

By Guille3691

THE WORLD'S MOST IN DEMAND PROFESSIONS

Across the developed countries of the world, skilled professionals are in high demand. Software engineers are needed in 24 countries, nurses are needed in 18, while 11 countries report a shortage of accountants. Explore the chart below to see which occupations are most in demand across the world and discover which skills are needed.

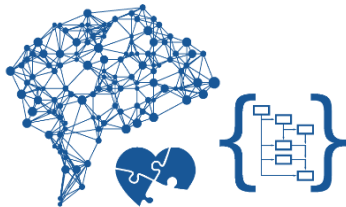


www.recruitingtimes.org

Top 10 skills

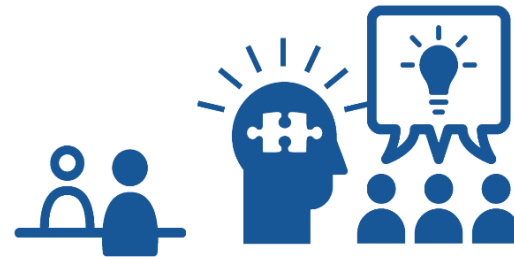
in 2020

1. Complex Problem Solving
2. Critical Thinking
3. Creativity
4. People Management
5. Coordinating with Others
6. Emotional Intelligence
7. Judgment and Decision Making
8. Service Orientation
9. Negotiation
10. Cognitive Flexibility



in 2015

1. Complex Problem Solving
2. Coordinating with Others
3. People Management
4. Critical Thinking
5. Negotiation
6. Quality Control
7. Service Orientation
8. Judgment and Decision Making
9. Active Listening
10. Creativity



Source: Future of Jobs Report, World Economic Forum

Washington Accord

Global Graduate Attributes

- Engineering Knowledge
- Problem Analysis
- Design/Development of Solutions
- Investigation & Experimentation
- Modern Tool Usage
- The Engineer and Society
- Environment and Sustainability
- Ethics
- Individual and Teamwork
- Communication
- Project Management and Finance
- Lifelong Learning

UN Sustainable Development Goals





Industry Perspective



Industry Perspective (cont'd)

- “*Defining Global Competence for Engineering Students*”

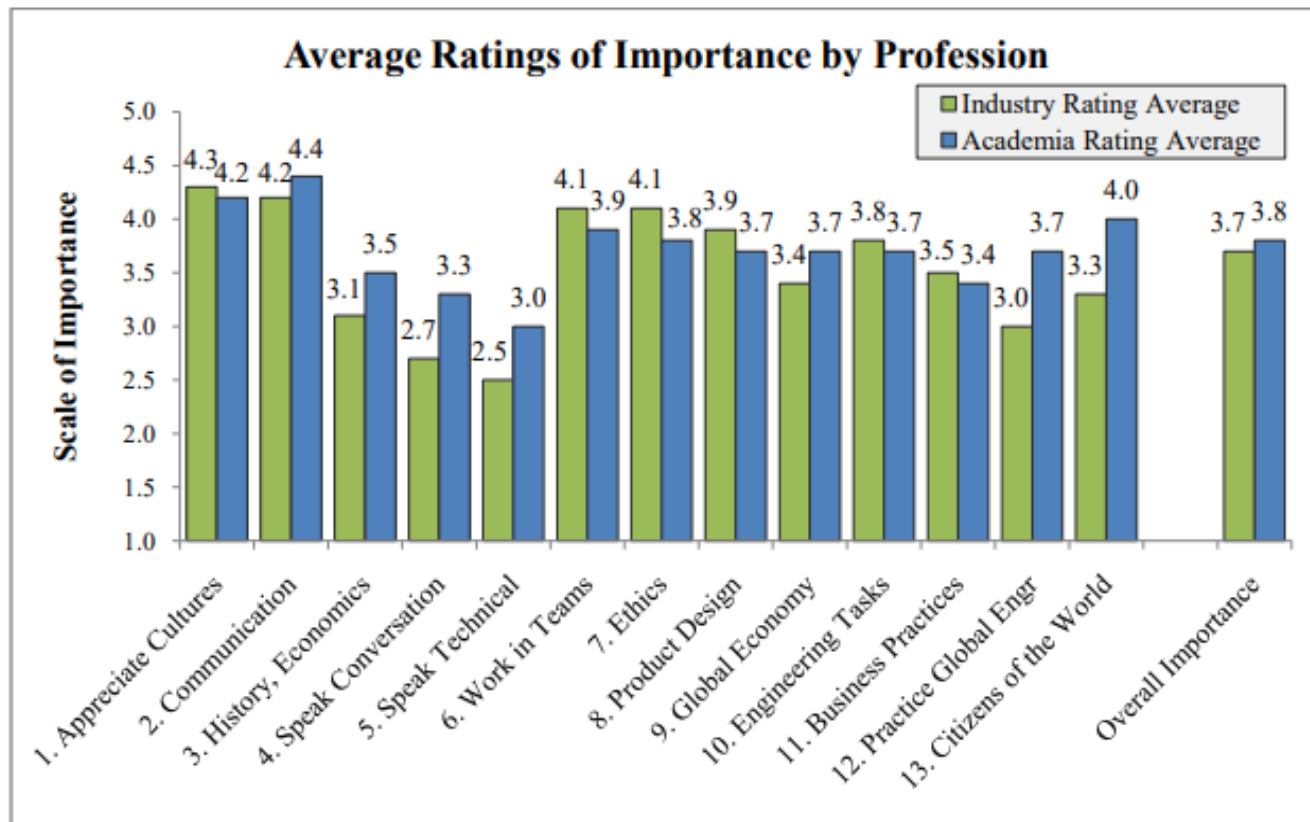


Figure 2. This graph displays the average ratings of importance for each of the 13 dimensions of global competence, separated by profession.

Industry Perspective (cont'd)

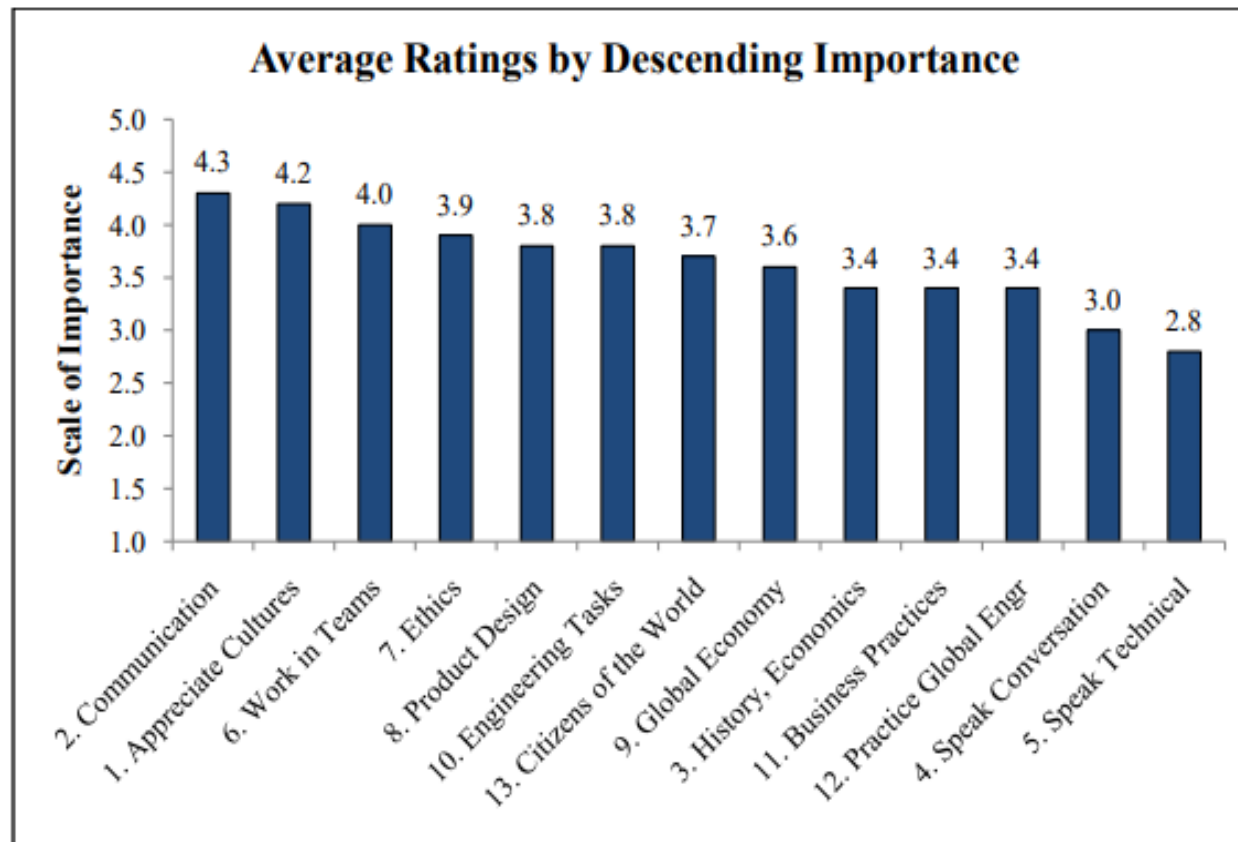


Figure 3. This graph displays the average rating of each dimension of global competence in order of importance. The order of importance (highest to lowest rating) goes from left to right.

Industry Perspective

- ASEE/NSF series of workshops on Transforming Undergraduate Education in Engineering (TUEE)
- Phase I – *Synthesizing and Integrating Industry Perspectives*
- 34 companies participated
- Identified knowledge, skills, and abilities engineers should possess in the near future.

TUEE – Phase I Findings



Table B.1. Workshop participant responses to the quality of engineering education in the following KNOWLEDGE areas, as well as their importance for the engineering workforce today and 10 years from now.



Questions?





ABET

BE CONFIDENTSM

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