IEEE Systems Council

Workforce Development Technical Committee

Thurs, Aug 18, 2016, 3.40pm Eastern

1. IEEE Workforce Future Directions Spreadsheet

Discussion focused on how to encourage more participation in worksheet.

Suggestion was to research areas, even outside area, to find future directions and enter them. Reminder email would encourage readers to view site and open directions up to debate which would increase participation and encourage more finer-detailed entries.

a) reach out to existing contributors and ask them to contribute to areas outside their expertise and their perspective on plan. Tentative email would be "I understand that you are not familiar with these areas but we sincerely wish that you would consider helping us with these areas"

b) utilise friends and internet sources to find future directions for each field and populate spreadsheet

c) with newly populated spreadsheet, announce it and need for debate in next newsletter – encourage others to add own entries that would be more aligned to future needs. Need to ask the right question: "what should colleges focus on to equip engineers for the future". Re-engage people such that they do it because they want to

d) after a certain threshold (such as 5 entries per field), have an expert, using a template, filter and choose the best entry for that field. Many retired engineers have expertise and are not so bound by different constraints

Other initiatives, like the Environmental Engineering Business Plan, utilise a number of paid staff for meeting, coordinating, and organising. A discussion ensued as to when and how to engage paid staff; one suggestion was to help with the qualitative data analysis (which is always time consuming). However, a counter-point was that staff would not be likely to have the expertise to do a proper analysis task in such a highly-technical field.

Environmental engineering plays a vital role in identifying solutions as they have to deal with issues like pollution and carcinogens while providing solutions such as reduced emissions, monitoring emissions, national enforcement, bio-remediation, etc. By knowing or identifying the technical problems, can focus on and develop solutions. In so doing, solutions reflect educational shortfalls.

Although supposed current focus is on undergrad curriculum, needs are career-long and multi-disciplinary. An example, the use of nano-technology in medicine has an effect: build-up of nano-materials in the body with concerns over disposal, damage to body, etc.

In terms of spreadsheet, put 2-3 bullets announcing spreadsheet and requesting people's perspective on future learning. Provide link and request 4 minutes of their time. Judy Scharmann can assist in this area.

Meeting was adjourned.