



The Engineering Voice

American Engineering Alliance

December 2015

Chairperson's Report

It's been a while since we last communicated to the membership via this Newsletter. Although you have not heard from us, AEA has been busy promoting its **Student Outreach** program. We have concentrated our efforts on City College of New York (CCNY) since we received strong support from the president of CCNY and the administrative staff. We have been working with the Engineering Dean, to try to introduce our "**Engineering Leadership Certificate**" program into the curriculum. We made a presentation to the professors on the Curriculum Committee who, unfortunately, did not embrace our initiative. They stated that the concepts that we were trying to introduce in the Engineering Curriculum were already covered in the various Engineering courses. Given that setback we took a different approach. In a recent meeting with a CCNY administrator, Dr. Brodzinski, we decided to start off with a lecture series. This should not encounter any resistance from the professors, and hopefully will open the way for greater interaction with the students.

To promote the **Student Outreach** program, AEA has been working with the Metropolitan Engineering Societies Council (MESOC). The Council comprises of 25 Engineering Societies in the NY Metropolitan Area. We are encouraging our sister societies to become engaged in the dialogue that is going on in the Engineering Community and Academia on how to best educate the Engineering students.

AEA will continue to push and prod our colleagues in our sister societies to become involved in this great debate on how to structure the Engineering education to better serve our students and the Engineering Profession. We will work with our colleagues to influence the contents of the Engineering curriculum through the ABET process. The

most expeditious way to achieve curriculum changes is through ABET, the Engineering Curriculum accreditation body.

The member societies (i.e. ASCE, ASME, IEEE, NSPE, etc.) that make up ABET are the ones who determine the contents of the Engineering Curriculum for their respective disciplines. If we can get the member societies to embrace the necessary curriculum changes, then we can quickly transform the education of our Engineering students and thus have a major positive impact on the Engineering Profession with collateral benefits not only for the Profession but Society as well (see article on "**Educating the Future Engineer**" in this Newsletter).

Recently, we revamped the AEA web site in an attempt to stay current with all the technological changes that have occurred. Our web site is now accessible on mobile devices. Going forward we will try to communicate with you thru the web site. We will put out a Newsletter if the need arises. Producing a Newsletter is both time consuming and expensive. In addition, the Newsletter is an inefficient way of keeping our members informed on a timely basis. For these reasons we updated our website so that we can quickly communicate with our members by giving timely updates of AEA activities. We have now the capability to post updates almost instantly. We encourage you visit the web site to see what activities AEA is engaged in.

Before I close, I would like to briefly address three issues (1) membership (2) finances and (3) volunteerism. In the past we have not paid much attention to increasing membership since we were focused on achieving results. Whatever members we acquired was thru word of mouth or thru recognition of AEA's pro-active positions. However, unless we grow the membership, AEA cannot aspire to be a major national organization. It takes resources to produce results and members provide the

revenue that allows AEA to be pro-active and visible on the national scene. We encourage to be the ambassadors for AEA. We will try to use the Internet (i.e., YouTube videos, etc.) in a creative way to attract new members. If you have any creative ideas, please share them with us.

Lastly, we encourage you to volunteer a small portion of your time to promote AEA activities. You can join an AEA Committee, recruit new members, help organize an annual social event, participate in a student presentation at a local college, write an article or blog for the web site or propose any idea or activity that promotes AEA and the Engineering Profession.

The future looks bright for AEA and the Engineering Profession. Come join us and help us achieve this bright future. I look forward to hearing from you.

- *Salvatore R. Galletta, P.E.*

(This Article was written by Salvatore R. Galletta for the NSPE Queens Chapter)

Educating the Future Engineer

The standing and reputation of a Profession is a reflection of the standing and reputation of the individual members of that Profession. If society does not give a Profession the respect and recognition that the Profession deserves, it is the fault of the members of that Profession for not living up to the high standards that professionals are held up to by Society. Let us get down to specifics. The Engineering Profession suffers from a lack of recognition and standing. Who do we blame for this sad state of affairs, certainly not Society. The blame lies squarely on us. It is up to each one of us to adhere to the high standards that define a Profession.

Unfortunately, the educational process that molds the future Engineering Professional has not been up to the task. Most, if not all the woes that afflict the Engineering Profession in

this country can be traced to the inadequate education that future Engineers receive in this country's Engineering schools. The narrow focus of the Engineering curriculum on the technical aspects of Engineering, produces Engineers that, while technically competent, are not prepared to deal with the many non-technical challenges that Engineers face in today's Society. That in brief, is the crux of the problem that faces our Engineering Profession.

If we want to improve the status of the Engineering Profession and elevate it to its rightful place among the learned Professions, we must address the education of the Engineer. The present four year curriculum needs to be revamped. We have to restructure the present curriculum to include all those non-technical courses that prepare the future Engineers to deal with the many challenges that they will face during their career.

These non-technical courses should cover at a minimum (1) ethics, (2) licensure (3) leadership, (4) communication skills, (5) business/finance concepts. There are undoubtedly, other social or non-technical skills that could be included in the Engineering Curriculum, but the five enumerated will adequately complement the technical component of an Engineer's education.

The ideal curriculum should strive to impart not only the knowledge and skills that will allow Engineering students to deal effectively with both technical and non-technical challenges, but also instill in them a sense of what it means to be a Professional. In essence, the challenge is to imbue in the young Engineer the ethos of the Profession. This means that the Engineering schools have to understand their critical role in molding the future Engineering Professionals.

The Engineering schools are the wellspring of the Profession; that is to say, their role is to produce Engineering Professionals who have a clear sense of who they are as Professionals and who know their responsibility to the Profession. In short, Engineering schools have to teach professionalism as part of a well-rounded curriculum. If we can accomplish this

through a well-structured curriculum our Engineering students will enter the Profession fully prepared to handle the many challenges that face the Engineering Profession.

It is crucial that Engineering schools understand and embrace their fundamental role in educating the future Engineering Professionals. Until they do, Engineering will never be considered a true Profession. Given the critical importance of the Engineering education to the well-being of the Profession, it is imperative that the Engineering Community become engaged in the education of its future Engineers. How can we best accomplish the reform of the Engineering curriculum? The most expeditious and efficient way is through ABET (Accreditation Board for Engineering and Technology). ABET has the necessary clout to influence the composition of the Engineering curriculum. If an Engineering school wants its curriculum to be ABET accredited it must adhere to ABET's requirements. But who dictates these requirements? It is us, the practicing Engineers who, through their respective Engineering Societies, i.e. (NSPE, ASCE, ASME, IEEE, etc.), determine what the educational requirements of the Engineering education should be. If we can get the Engineering societies that are members of ABET to agree on an Engineering curriculum that addresses the needs of the Profession, as outlined above, then we can be assured that in due time the Engineering Profession will gain the respect and recognition that a true Profession deserves. Only then can we hold our heads high as members of a noble Profession with equal standing among the other learned Professions.

My advice to my colleagues is to advocate for reform of the Engineering curriculum through your respective Engineering Society. In addition, become involved with your local Engineering schools. Share your knowledge, experience and wisdom with the students.

If we, in the Engineering Community, become more actively involved in the education of our future Engineers, then we can look forward to a bright future for the Engineering Profession

and by extension, Society, the beneficiary of our services.

- **Salvatore R. Galletta, P.E.**
NSPE Queens Chapter
Past President

Call for Articles

Now I know Engineers have news and opinions to share, or maybe a poem or essay? Why don't you share what you know or care about with your fellow AEA members? If you don't want to write something yourself, try to get an article from a colleague or outside party that you think we should print.

- **Lou Comunelli, P.E.**

Checking the Job Bank?

Please remember to look over the Job Bank portion of our web site. Using it is free for all our members. If your firm needs to hire Engineers, advertisement listings can be arranged at reasonable prices.

- **Lou Comunelli, P.E.**

Treasurer's Report

As of December 28, 2015, AEA's account balances are as follows:

General Account	\$3,479.20
TELAF	\$1,000.00
CDs	<u>\$4,305.70</u>
Total	\$8,784.90

- **Brian Gill, P.E.**

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American Engineering Alliance

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