

ABOUT THE PROGRAM

Comments from a [food engineer](#) who took one of our courses in the Fall/2012

...This is in the area of food engineering education. Food Engineering is one of those areas that has a variety of meanings to people and for which a formal definition is often lacking. Several universities have addressed this issue by joint ventures between Life Sciences and Engineering to create formal food engineering criteria. However, due to the general lack of understanding of these programs and their relatively scarce nature, it is rare to find this degreed person on the market. As a result, most engineers in the food industry come out of a chemical, agricultural, biological, or mechanical engineering area. Many of these engineers will have had little or no actual food engineering educational exposure.

Over the last two years, I have been researching potential programs to either hire people from or to send people to for further education in food engineering. As a mid size company, we have no issues in being able to attract people, but cannot always get the exact educational experience we desire. We can easily hire mechanical or chemical engineers right out of college, but then to get them a formal food engineering program becomes very difficult. Additionally, we have implemented an internal engineer development program to allow the gradual education and transition of a few engineering technicians to obtain a formal engineering bachelors. Once again, this development program is in need of a food engineering curriculum.

During my quest in seeking out available programs, I did find a number of on site programs at universities that could be potential targets for future recruiting. However, I was very excited to find that Texas A&M had a distance learning option that could be taken as either a certificate or a full fledged master's program for people with an undergraduate engineering degree. To my knowledge, this is the only distance learning program for food engineering. I quizzed the program director Dr. Moreiara last summer about the program and from all indications it seemed a perfect fit for our needs.

But, questions about the program remained. Could the program be completed by someone who was working full time and perhaps traveling? Was the time commitment reasonable? Would the shadowing of an actual class and labs really work? Could someone out of school a few years handle the curriculum? And, most of all, would the content provide value? What I really needed was an unbiased guinea pig to test the program out. As an overly optimistic engineer with experience in most of the areas I wanted to get education for others, I decided to volunteer myself and check out the program.

In September, I was enrolled in the certificate course for unit operations in food processing. The course covered a wide variety of topics which included: food rheology, drying, freezing, thermal food safety, heating, transport, and deep-fat frying. I did not

go into the course thinking about gaining knowledge as much as to measure the course effectiveness and doability for the full time engineer. I was very pleasantly surprised that the course did provide me with additional understanding in several areas of food processing and certainly provided a detailed look into key food processing areas. The distance learning part also worked well. Texas A&M had almost all lecture videos up on line within a day of the actual class. Quality of video was good and a few glitches were quickly corrected when pointed out. The professor and graduate assistant always answered any questions I had within a day. Homework was passed back online and test were sent out and returned within a fixed time based on my schedule. Texas A&M has an online learning computer system and web site that is set up extremely well. Obviously, the distance education will never get to the point of the actual class interaction, but this class was probably about as close as one can get.

So, how did a 57 year old engineer with no free time and a child getting married in the middle of the course do? I just successfully completed the course. The biggest initial struggle for me was with returning to the metric system units which slowed me down in the first few weeks. The math came back quickly and was really not all that intense. Although some of the newer empirical formulas have been developed since I a bachelors student, the basics have not changed. The course was well worth my time and I will probably continue with the rest of the certificate series and start pushing the courses down to new hires and other engineers.

As great as I think this program is, I am overall disappointed by the lack of these type of programs for distance learning. Perhaps if Food Engineering could run a feature article on this subject and the Texas A&M program it would help to raise awareness to your readers, help the Texas A&M program become even stronger through more students, and help the food industry overall with a source of education and training for engineers. I have no personal affiliation beyond this course series with this school and this is my first contact ever with Texas A&M. My interest in your involvement is strictly for enhancement of the food industry overall.

If you are interested in pursuing this, you can check out their website on this program at <http://baen.tamu.edu/distancelearning/DL12/DLFE.html> and you can certainly contact Prof. Rosanna Moreira at rmoreira@tamu.edu I would be happy to assist in any way I can to raise the awareness of this program. I have not made Prof. Moreira aware that I am sending this email to you, but you can certainly mention my endorsement of this program if you follow up with her....