



Sloan Career Cornerstone Center

Profiles of Chemical Engineers



Kim Lloyd

**Maintenance Engineer
DuPont
Niagara Falls, NY**

Education:

B.S. - Chemical Engineering, University of Delaware

Job Description:

Maintenance engineer responsible for managing an area equipment integrity team

Advice to Students:

"I would recommend taking a lot of courses in areas besides engineering, like communications, economics, and writing."

Video Transcript:

"I am responsible for managing our area equipment integrity team. I keep our plant on track with our predicted and preventative maintenance on all of our major equipment pieces. Responsible for making some changes to the process area, like changes in materials of construction and changes in pipe code, just basically troubleshooting some of our major pieces of equipment."

Interview:

Lloyd: My name is Kimberly. I'm a maintenance engineer at the DuPont Niagara Falls Plant.

Q: What does a maintenance engineer do?

Lloyd: I'm responsible for managing our area equipment integrity team. I keep our plant on track with our predictive and preventative maintenance on all of our major equipment pieces. I'm responsible for making some changes to the process area, like changes in materials of construction and changes in pipe code, just basically troubleshooting some of our major pieces of equipment.

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Q: How valuable is a co-op or internship experience?

Lloyd: A co-op program is a great thing for a student to do. Either a co-op or an internship of some kind. It gives you a great way to see what industry is truly like. Before you get into it, it gives you an opportunity to make some decisions about where you want your career to take you. DuPont's co-op program is set up so that a co-op will work with us for about three months, go back to school for three months, and then come back for a second term.

Q: What are the key skills that a person is going to take away from a co-op experience?

Lloyd: One of the biggest things our co-op is going to learn is how to work with people in industry. In a plant environment, you've got to be able to talk to people for them to respect you. There's a lot of knowledge out there that new engineers think they know. They may think that they can solve problems by using the books that they studied in college. But you can't underestimate the value of the knowledge that's out there with people who've been working with the process for 20 years.

Q: What courses did you take in college that help you in your job now?

Lloyd: I pretty much did the basic chemical engineering track. Most of what I do now actually doesn't depend on what I took in my chemical engineering program. Actually, some of the other courses I found to be more valuable. I took a lot of economics classes, which helped me out a lot. It's amazing how much economics actually has to do with the engineering field. Even English classes-you end up writing a lot more than you thought you were going to. Some of the other basic classes like materials, basic electrical engineering, and physics classes were also very helpful. Other than that, most of my college was the standard chemical engineering-thermodynamics, heat-mass transfer, kinetics, and chemistry.

Q: What advice would you offer to chemical engineering students so they will be the most marketable when they graduate?

Lloyd: I would recommend taking a very broad curriculum besides just the engineering classes. I would recommend taking some classes in other fields. Communication in the industry is very important, and I would try to work on that. Internships are extremely valuable and it's important to get a lot of hands-on training in the engineering field. That actually gives you a lot of credibility when you're in the industry. So, instead of coming at things from a very theoretical approach, it gives you a chance to come at things from a practical standpoint. Most of industry does tend to be more common sense oriented than engineering school teaches you it is. Engineering courses may make you think that you can solve everything with a formula, but that's not really the case in the real world.

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Q: Can you talk a little bit about what your expectations were when you were a freshman and sophomore student and how it compares with the reality of what you found?

Lloyd: I'm working in the type of environment that I thought I would be working in. I'm working in a plant. It's got its downsides. It's a very dirty place, but what I'm actually doing is different from what I thought I would be doing. I'm not doing any chemical engineering. I've done environmental work. I've done mechanical engineering work. I think that there's a lot of opportunity in engineering for different types of careers that I didn't see when I was in college. In college, I saw the one track to a major company, and you would stay there for the rest of your life.

Q: What sort of professional development opportunities exist once you get out of college?

Lloyd: I have taken some courses on my own at universities close to where I work. But actually, I think what I found the most valuable are some of the courses sponsored by DuPont. If you work for a company like DuPont, it will put a lot of money into your training, and I think that that has probably been some of my most valuable experience. I'm starting up a vibration-analysis program at our plant. So I've been doing a lot of training in that and I've learned quite a bit that way. Also, the environmental courses that I've taken have been very helpful.

Q: How would you recommend that a student go about finding that first chemical engineering job out of college?

Lloyd: An internship is certainly a great way to get your foot in the door with a company. Most schools have recruiting programs. That was the way that most of the people that I went to school with found their jobs. College recruiters will come on site and go through the interview process, and that's the way it will work. That seems to be a better way to do it than going to the newspapers. Contacts mean a lot out in the industry, so try to work as a co-op or an intern, meet people, and talk to people.

Q: What advice would you give to a chemical engineering student?

Lloyd: I would recommend taking a lot of courses in areas besides engineering, like communications, economics, and writing. Also, research what's out there. There isn't just one track for an engineering career-there's a lot of opportunity. There are a lot of different jobs you can be doing, whether you work in a big company, a consulting firm, or for the government. It's not so much the work that you do; it's who you're doing it with. So I'd suggest that you find an environment that you're comfortable in.

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