



# Sloan Career Cornerstone Center

## Profiles of Chemical Engineers



**Cynthia Murphy**

**Business Coordinator  
Chevron Products Company  
Richmond, CA**

### **Education:**

B.S. - Chemical Engineering, University of California, Davis

### **Job Description:**

Business coordinator involved with business planning and financial management

### **Advice to Students:**

"I think sometimes you need to step back and enjoy life a little and get the whole college experience. Take some classes that you really want to take. Join a club. Be active in the community."

### **Video Transcript:**

"My title currently is. I help to coordinate generation of business plans which really set our goals and objectives of the refinery. Work with our individual business units which are operating plants, and, I help to prioritize projects in the refinery, what work we need to be doing and then help to secure funding."

### **Interview:**

Murphy: I work for the Chevron Products Company at its Richmond refinery. My current title is business coordinator. I do business planning and financial management, which is not really a typical chemical engineering position if you kind of think about it. But I help to coordinate the generation of business plans that really set our goals and objectives of the refinery, work with our individual business units that are operating plants, and help to set those goals, making sure that we carry them out throughout the year, and adjust them as necessary. On the financial management side, I help to prioritize projects in the refinery- what work needs to be done- and then help to secure funding.

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**Q: What skills did you learn as a chemical engineer that prepared you for this job?**

Murphy: For my current position, business coordination, it was more the soft skills that I learned in school- the technical writing, the leadership through AIChE and other organizations, public speaking, debate, and group communications. Those are the skills I utilize now, since I help to coordinate, as well as give leadership to other folks in the organization as their supervisor.

**Q: Is managing people difficult?**

Murphy: I think one of the biggest changes you have to face when you're trying to supervise folks is that you're used to doing it your way. And you think that's the optimal way, that's the best way. And when you're trying to supervise other folks, you have to realize that there's more than one way to approach something, there's more than one way to complete a project. So you have to give your people the leeway to do it, and know that the end result is going to be accomplished. It may not have been your way, but it is going to work. Then you need to encourage them, because you need to encourage that creativity. You were encouraged when you were in that position, hopefully. I give them the support that they need, and if I don't feel that's going to work, we talk about it and maybe suggest a second way.

**Q: What kind of skills does a chemical engineer bring to management that some other disciplines might not be as familiar with?**

Murphy: I think, in general, engineering uses the process of approaching problems in a systematic way, thinking through the alternatives, choosing the best alternative, trying it out, and then analyzing if it does work. In terms of chemical engineering, I think it's a very strong curriculum that has a vast amount of classes and expertise that some of the other engineering disciplines don't learn.

**Q: Did you have a mentor while you were a student? And did you have one when you started working in this job?**

Murphy: I think at the undergraduate level I looked to the faculty quite a bit. I had built up quite a rapport with the department head as well as some of the other faculty members, so I really listened to their opinions. Some of them had already worked in industry, which I think is important for faculty members to do, to be able to provide that perspective to the students as opposed to just at the collegiate level. I think the students feel that faculty are very research oriented, and they don't know what the real world's like. So I think that having faculty that had seen both sides was good for me. I think students look to each other to build that camaraderie and teamwork, so I relied on that as well. In terms of working at Chevron, when you start at the company, you're assigned to another engineer who actually serves as your official mentor and is able to show you how to even just maneuver around the refinery. It's a large place. How do I get from point A to point B? Who do I need to talk to? Who do I need to call to get that information? You're not going to come in with all the answers, but there's going to be somebody there that has some information that will be helpful to you. So I think I relied heavily on that person. And then even just your work group is a great resource, because your mentor is not always going to have time to spend with you and they're also not going to have all the expertise.

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**Q: In management-type positions, are there frustrating things, like office politics, that you have to work through?**

Murphy: Well, I think office politics do exist. We're all people, we're all trying to manage a business, and we're all trying to work off our business plan and our objectives. But, unfortunately, we all have our own personal thoughts on how we should do that. I think that office politics gets in there because people are trying to express their personal opinion on how to get things done. Maybe we're not moving fast enough, maybe we're moving too fast. It goes back to the fact that we're all people and we're all going to factor in our own opinion. And I think you have to understand office politics. You can't ignore it, and sometimes you have to use it to your benefit. Just as you become more and more familiar with working in management structure, you just learn how to deal with it.

**Q: Are there things outside the job that you use to stay technically current and to learn some of the managerial skills that you feel you need?**

Murphy: I think one of the biggest ways to increase what I want to call soft skills -- your leadership skills, your communication skills is involvement in the community. I'm very active in AIChE from a leadership perspective, as well as on committees. I'm also active in the community on different educational boards and volunteer programs. So it gives you that many more opportunities to speak publicly, to be able to work in teams. You don't always have to be the leader. You can be a very effective team member as well. Those are the kind of the skills that I bring back to my job in learning how to deal more effectively with people.

**Q: Do you find more or less satisfaction in a business-type situation, as opposed to what you might have found as a chemical engineer working in a plant setting?**

Murphy: I think it's just different and I think Chevron, like many large companies, affords chemical engineers the opportunity to move into different arenas, ones that are typically chemical engineering jobs, working in the plant, optimizing on a day-to-day basis, doing process engineering, doing design engineering. But, you can also move into business management and financial management and it doesn't have to be for the rest of your career. So it affords you the opportunity to move around, gain some skills that you can then take back into the technical arena as well. Just because you go back into working in a plant doesn't mean you stop communicating, being a leader, or being a team player.

**Q: How did you become interested in chemical engineering?**

Murphy: Well, I've always been a very curious and creative person, even when I was a child. I always enjoyed math and science. As it turns out, my father is an electrical systems engineer, so I think I was kind of raised with the engineering mentality, the thought that I would go off and be an engineer. When high school came around, I really enjoyed chemistry and-I think you hear this from a majority of chemical engineers-we like chemistry, we like math, we like science. 'Oh, I think I'll go into chemical engineering.' So that's how I got into the chemical engineering curriculum. However, it still interested me through my freshman, sophomore, and junior years, which is where you really get into the chemical engineering courses, and so I stuck with it.

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**Q: Where do you see the profession going?**

Murphy: I think chemical engineers are very well respected in the industry, not only in the oil industry but in other chemical engineering industries, as well as industry as a whole. I think folks recognize the strong technical background, the problem solving approach and recognize that we can bring a lot to the table. So I think that our involvement and respect in industry are only going to increase.

**Q: If you could go back to your junior year in college, what would you do differently?**

Murphy: I think I would have probably taken more communications classes, public speaking, English classes, and even just other classes of my own interest. The chemical engineering curriculum is filled with required coursework. A lot of times you don't have an opportunity to explore other non-engineering-related class work because you're so worried about graduating and getting all of your credits. I think sometimes you need to step back and enjoy life a little and get the whole college experience. Take some classes that you really want to take. Join a club. Be active in the community.

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