Michael L. Smith, Jr.

On how to get hired: “You can always find people who have the skills on paper. But it’s the skills in life that play into the job market more than anything. It’s being able to understand the dynamics of working with other people. It’s great news when an employer hires a person and finds out he or she is able to work without supervision. People like that are worth their weight in gold!”

—Michael L. Smith, Jr., August 3, 2009

Michael L. Smith, Jr., had a bit of a false start after high school. “I thought I was going to college, but I wasn’t really well prepared,” he recalls. “My home life wasn’t great. My studying habits weren’t really there. I started at the University of New Mexico and found out really quickly that I wasn’t ready.”

Michael asked himself what he could do if attending a university wasn’t the right path for him. He knew he needed to further his education. He heard about Albuquerque Technical Vocational Institute (ATVI, now Central New Mexico Community College) from friends. “I checked it out, talked to a counselor, and was really interested in the laser electro-optics technology (LEOT) program,” he says. “It had good job placement, a good starting salary, and potential for growth in the area. It was an amazing program and I fit in with the people. They were either older, with a change of life event, or young like myself at the time, looking for a path alternative to a four-year university.”

Starting at ATVI was no picnic. Michael struggled a little at first, but once he got his study habits down, “it was a lot of fun.” The differences between ATVI and Michael’s short university stint were clear. “The teachers at ATVI seemed to care more about the students. Classes were 15–25 students and I felt like I was someone who really mattered,” he says. “The teachers expected us to study, but they didn’t assume we already knew how to study. They coached us on what and how to study. We had study groups to help each other.” As a result, Michael’s college efforts at ATVI met with great success.

Like many of his classmates, Michael was offered a job before he graduated. “I was offered a position at Texas Instruments in Dallas to work in quality control of optics, lasers, and electro-optics manufacturing,” he says. “They mated me up with some great senior engineers. I worked with a Ph.D. and he mentored me in more than just my career, but also a lot of life issues. I have a lot of fond memories of working with someone like that. I still talk with him 23 years later.”
Today Michael works at Sandia National Labs, a nationally funded laboratory. Sandia was chartered to develop science-based technologies that support our national security as well as to conduct research and develop new energy-related applications for the U.S. Department of Energy. Michael works in semiconductor materials and device sciences, a department of the energy laboratory. In addition to supporting nuclear weapons surety work, Michael conducts research on increasing the energy efficiency of solid-state lighting sources and analyzing the microstructure and nanostructure of epitaxial thin-film materials. Michael and his colleagues are “looking at things like the next generation of solid-state lighting, photo voltaics, and nitride-based optoelectronic emitters, trying to improve the materials from which they are built.”

Michael is a principal technologist, working with many highly qualified engineers on cutting-edge applications. “Many of my peers have bachelor’s or master’s degrees,” Michael says. “There are a lot of Ph.D.’s around, too. I’m the least educated person in my group.” Perhaps he is, on paper. But Michael is capable and confident. “I’m OK with that,” he says. “I feel good about my abilities. I’ve been trained well.” In his mind, Michael gets to do the most exciting part of research: turning two-dimensional ideas on paper into three-dimensional realities. “We, the technologists, end up doing all the hands-on work,” whereas the Ph.D.’s interpret the theories and the engineers create the designs. “We get to try it and see if it works.”

One of the major reasons for Michael’s career success is his ability to work with people. According to Michael, “eighty percent of a job is people’s ability to get along with one another.” Having been both an employee at TI and Sandia and a former employer at his own semiconductor processing equipment business, he sees people skills and high ethical standards as keys to an ideal workplace. “When I interviewed people for jobs, I’d say, ‘Tell me about how you liked your previous job. How was your manager?’ You can tell a lot about people by how they react to those questions.”

Michael likes to emphasize the importance of mutual understanding between coworkers. “People react to situations differently,” he says. “There are different personality types.” He wants to help photonics students learn that there’s more to work than the “book stuff.” From his clear communication and unflappable outlook, it is obvious that understanding people is one of Michael’s greatest strengths.

Michael L. Smith, Jr., earned a diploma in laser electro-optics technology from Albuquerque Technical Vocational Institute in 1986. He lives in Albuquerque with his wife, Dana, and children, David and Danielle. Michael loves to play basketball and racquetball, ski, golf, and garden. He serves the community through volunteer work in the schools and his involvement in non-profit organizations.

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