



Betty Garcia

Manufacturing / Quality Engineer

CAREER QUICK LOOK

Years in Field:

Less than 1 year as a Quality Engineer

City/State:

North Andover, MA

LinkedIn:

None

Video Clips:

[Watch on YouTube](#)

Ethnicity:

Latina

School:

Mt. Wachusett Community College, Instituto Tecnológico de Santo Domingo, Dominican Republic

Degree:

BS, Industrial Engineer; Master's in Management

Career Pathway:

Manufacturing

Personal Time:

Time with family

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How did you get interested in Manufacturing and what has your journey been like so far? What is your background?

I decided I wanted to be a Manufacturing Engineer at age 14. I participated in a 20-hour summer internship for a shoe manufacturer and I was in love. I knew then, *“This is what I want!”* It was fun because I spent a whole day at the factory, talked to the operator, saw what he was doing and knew I wanted to work in the Manufacturing Industry. So, that’s how I got started.

I’ve been really good with numbers since I was little. I love math and people always told me, “Oh, you should be an Engineer when you grow up because you’re good with numbers and that’s what Engineers do.” So, I had that in my mind. I considered Electronics and Civil Engineering, but I wasn’t really interested in these fields. Then I heard about Industrial Engineering. It was starting to be a popular profession back at the time in my home country of the Dominican Republic. So, I gave it a try and it was just the thing for me.

Back home, there are a lot of women that are engineers. It wasn’t equal—I would guess 60% men to 40% women—but it was still high compared to the U.S. So, I did not feel like I was the only woman doing it.

What is your educational background?

I received a BS in Industrial Engineering at a University in the Dominican Republic—on a full scholarship. When I came to the U.S. several years ago, I started with an English immersion program, took the TOEFL and then completed a Master’s in Management. Earlier this year, I took a Lean Manufacturing Course at Mt. Wachusett’s Community College to prepare me for my new role as a Quality Engineer. The noncredit course was intensive—2 months, 4 days per week and 6.5 hours per day.

What do you love about being a Quality Engineer?

What I love the most is that nothing that I have done ever becomes repetitive. Every day I will have a different issue that will be challenging me. I think it's wonderful when you can learn something new every day.

What advice do you have for other women considering this career?

It is important for women to know that it isn't as hard as they might think. It's not that complicated. You can do this. We have sent three women to space; this is something we can definitely handle. We can bring a lot of companies back to the United States if we have more women working in Manufacturing. I think so, I want to believe that.

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Tell us what you do as a Quality Engineer: What is a typical workday like?

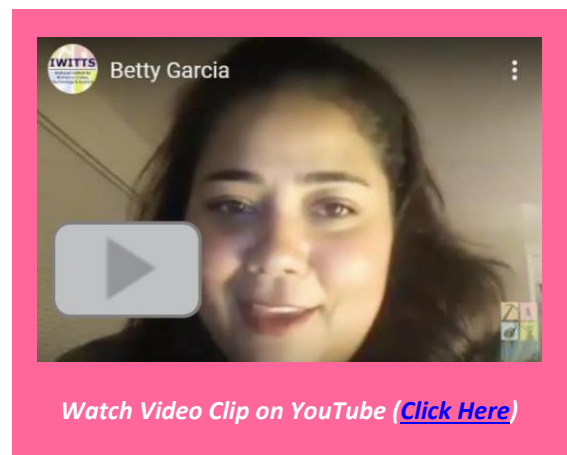
My current company manufactures PCB electronic boards. The first thing I do every morning is print the reports on issues—returns and reworks—and then using a Lean Tool I prioritize them. After that it depends, things change every day. For example, I may need to check on the products that I have on the floor for customers and communicate with them. I may do audits on the floor—checking that we are following the processes. Each day is different, which I like.

Can you give me an example of a fun problem you have solved?

Yesterday, I had a quality meeting with my counterpart for one of my customers. We saw in a Quality Report that some non-conformances were a bit higher than usual and they wanted it addressed. Apparently, prior to my involvement they had been trying to get it resolved for some time. So, I went to research and then I went to the floor station by station and I saw how the operation was carried out. At one of the stations, I could see that the way some items were being cut was creating some damage. I showed this to the engineers, who made an immediate change and the problem was solved. It was something simple, but it takes time to figure it out and you have to be very detail oriented. Now, we have been through the whole process, the problem has been fixed and the customer is happy!

What makes you successful in your work? What is your greatest professional accomplishment?

Two things: One, I really listen to other people and learn from their experiences. Two, when something needs to be figured out, I don't stop if I don't know something. I keep going until I figure it out. When I first started at my current job, I had no background in Electronics. So, not only was I working in a second language, but Electronics has its own language with many technical terms. At first, I thought to myself, “I don't think I can do this. Everyone is so smart, and they know so much, and I am not going to be able to discuss the same issues they are talking about.”



I didn't let that stop me though. I read books on electronics and I questioned the people that have been in the company longer. I asked them to explain to me: "Why this is bad? Why this is good? What do you think is the best approach?" With the operators, it's the same thing. I never tell them they have to do something this way, I listen to their feedback on what is best because they are the ones that are building the products and they know better than me. I think operators feel they can come to me and tell me whatever is going on, they are not afraid, and this really helps me to be effective in my job.

What challenges have you overcome?

When I moved to the Boston area as an immigrant, I wasn't fluent in English and getting a job in my field was challenging. There are so many colleges with top students in Boston—Harvard, Boston University, MIT to name a few—so I was not competitive in the job market even though I had a BS in Industrial Engineering and several years' experience working in industry. I had to start over, taking English classes, preparing for the TOEFL test and working side jobs such as babysitting and waitressing. I decided to get a Master's in Management with a concentration in Accounting because I'm good with numbers. Except, I really didn't like doing Accounting. It's doing the same thing every day and as an Engineer I like to solve problems. After a year and a half doing Accounting, I moved into Planning instead, as I had some background in it. Fortunately, that's when a manager approached me and said, "I see you have a degree in Engineering, and we need a Quality Engineer and I think you would be great at it."

I told him I didn't have any experience in Quality, but he told me don't worry I will teach you anything you need to know. That's how I got back to what I really love to do—Manufacturing and Engineering. I really like being on the floor—touching the products and seeing what the issues are—that's what I'm really passionate about.

How has Mt. Wachusett Community College helped you in your Quality Assurance job?

The Lean Manufacturing training I took at Mount Wachusett was critical to my current position as a Quality Assurance Engineer. I had no background in Quality when my company asked me to take on this new role, and without it I don't think I could have done this job.

Do you ever have any female company?

Where I work, there are only two women in engineering and about 12 men. I would love to see more women and more equality. When I go to a meeting or I am on the factory floor, I don't want to feel like I am the only woman there. My male colleagues listen to me and we're able to work together effectively. It's just that I get the feeling we need empowerment; we need more women working in this industry.

What are your future goals for your career?

I will have many opportunities as a Quality Assurance Engineer. I know my current job will open many doors for me because I am gaining so much experience in this field. There are different ladders for Engineering. You start as a Junior Engineer and then progress to become a Senior Engineer—it takes time and I am not rushing it. One thing I do know, is that along the way I want to inspire other women to work in Manufacturing and to be Engineers.



Betty and her sisters

Do you have a mentor or role model?

My family moved to the U.S. when I was 13 and I stayed in the Dominican Republic with my Godmother, my Aunt. Both of her kids were Industrial Engineers—a boy and a girl—and role models to me. I heard their stories of what they were doing and the companies they were working for. That's how I became interested in Industrial Engineering. My Aunt was also very encouraging and supported me through the application process to college.

Do you have any Certifications?

Certified Industry for Printed Circuit Board and Electronics Specialist

How do you like to spend your time off?

I love spending time with my five sisters—I am the oldest. It's always fun when we are all together. I love to watch TV series on Netflix and read in Spanish.



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