

# Fordham Footsteps: Alexia Couture, FCRH '13, Interview Transcript

Matt:

Hey listeners, welcome to Fordham Footsteps, the podcast that features Fordham alumni and discusses their path from their time as a student to their current career.

Sara:

Some will have a direct correlation to their majors and others will describe how they took some unexpected turns. Either way, expect an insider's guide to certain industries and some great stories from our esteemed alumni. I'm Sara Hunt Munoz, senior director for strategic initiatives.

Matt:

And I'm Matt Burns, associate director for young alumni and student engagement. And with us today is Alexia Couture, Fordham College at Rose Hill, class of 2013. Welcome.

Alexia:

Hello. So happy to be chatting with you both.

Matt:

So glad to have you here. So you were a math major, right?

Alexia:

Correct.

Matt:

What does that mean? You do algebra all day? Like what does that mean?

Alexia:

It's a good question. I think, honestly, it could mean many different things. I think when I was in undergrad, we had one track for the math department and that was kind of like this pure math. We did a lot of abstract thinking. Like here are a lot of formulas, here are thin theorems, we're proving them. But I do know now I think, and I could be wrong, but when I was leaving, they kind of added more applied math in there. Some more kind of like hard stats and probability. And if you were interested in maybe pursuing that, but yes, while I was there, it actually was a lot of just equations and a lot more words than you would expect. I remember looking through one of my homeworks one day where we just had to do a lot of different proofs, and it was a hundred percent words, no numbers. And I remember my roommate was like, "Oh, was that math?"

Sara:

Did you go into college looking for a math program? Did you want to major in math from the get-go?

Alexia:

Yeah, I did. When I was in high school, math was always my favorite subject as well. And it wasn't too much thinking about what am I going to do with this? It was a lot more about what subject I just enjoyed learning and I always enjoyed learning math. And I did in fact kind of go in thinking if I don't know what to do with it, I'll just teach math because there always does seem to be a need for good math teachers out there.

Matt:

Did you have specific career aspirations?

Alexia:

Yeah. I mean, I think going in, I wasn't quite sure, but I was like, oh, I'll just teach math. And then as I learned more, I really loved, I know this was at a college level, but I really did love all of my math professors there. And I remember thinking, oh, if people with this kind of passion we're teaching at lower levels, then perhaps it would get people more interested in mathematics. So it was really kind of like an inspiration for my passion, but then also seeing how teachers with passion teach. And I got that at Fordham in the math department.

Sara:

And how does the theology minor fit in?

Alexia:

That goes a little bit into my family. So I have one parent who is Catholic and one parent who is atheist, and just always growing up kind of like finding religion to be very interesting, but also kind of seeing the people scrutinize it as well. And so just wanting to learn more about it for myself, no intention of kind of taking that into a career move, just also for sincere learning. And then when I decided I wanted to study abroad in Rome, it kind of all just came together and made even more sense to kind of package my study abroad more for my minor than for my major.

Sara:

It's very representative of the Fordham liberal arts experience to have the math and the theology. I love that.

Alexia:

Yeah. No, it's definitely, it was a nice balance. It was kind of like this very practical, there's always an answer, you know what's right and wrong, to this like, you don't really know and like there's maybe a lot more kind of unknown. It was a cool balance to have both of those in my education.

Matt:

Kind of a fun play with math with that, too, talk about proofs and theorems and all that. How can you deal with the unknown until you can figure something out?

Alexia:

Right. Exactly.

Matt:

We are getting deep in this podcast here, folks. All right. So you graduate in 2013, what was your first step?

Alexia:

So another thing, I guess I just had ideas in my mind from young ages. When I was younger, I also thought I want to do Peace Corps. So, that kind of stayed with me all through college. So I knew looking into it, I had to apply for Peace Corps early. So I applied for Peace Corps after my junior year of college a year before I graduated, knowing that that's what I wanted to do post-graduation. So I graduate 2013 and one month later I got on a plane and flew over to west Africa, specifically Sierra Leone, where I got to do Peace Corps and I taught mathematics. So I was like, this is great. This is what I want to do. I get to learn about a new culture. I get to teach math, something I want to do as well. And I think that's when I learned, I didn't want to teach math.

Sara:

Oh.

Matt:

Really? Why?

Alexia:

I was just like, the patience teachers have to have is so much higher than the patience I was naturally born with or developed over those 22, 23 years of my life. And I also realized, teaching, I taught junior high, teaching junior high fractions, for example, I would just write the equation on the board and I would say, "This is what we're learning." And someone would raise their hand and they would say, "I don't understand," and I would say, "That's not a question." And I just realized it was impossible for me, without trying really hard, which I did, and I think I ended up being a good teacher, but it was just so hard to be able to communicate something that I never had a hard time learning. And to communicate that to someone who was having a hard time learning and that step of being able to clearly communicate something in a way that the student needed was so, so difficult.

Alexia:

And then I slowly started disliking the students because I was just like, how do you not understand this? And why are you so bad at math? And I also think that I don't think teachers should be disliking their students. And so maybe it was just because I was too young and I still was coming off of my kind of like high pure math, but regardless, I'm glad I experienced it. But then it did kind of set me on a course that I realized there's so much more I could do with math. And I think teaching just wasn't my calling.

Sara:

That was a one-year commitment?

Alexia:

So Peace Corps is actually a two year commitment. But when I had been there for one year, I was having some health problems. So they kind of sent me back to the States to get better and then go back. But when I was in the States doing physical therapy and stuff for my health, while I was there, Ebola had actually already come, but Peace Corps kept saying like, don't worry, nothing's happening. We're not doing anything. And then while I was back in the United States, the rest of the countries got evacuated. So they closed out all of our service after one year. So I ended up only being there for one year, which was very sad because you build bonds with the community and make there. So it was sad, kind of like this abrupt like everyone's gone now.

Alexia:

But I still keep in contact with as many people as I can. I got to go back to Sierra Leone actually with my current job, just lined up perfectly where someone was going to Sierra Leone for some work. And I kind of asked, I said, "Do you need help?" And I said, "I can offer you my experience and my skills," and she said, "Yeah, I would love some help." And so I got to go back.

Matt:

So tell us what you do right now.

Alexia:

So currently I work for the CDC in Atlanta, and I recently moved within the CDC. Currently I'm actually in the influenza division working specifically on COVID burden and severity work. But where I shifted from was the Center for Global Health, from emergency response and recovery. So I went from kind of a global thing to the domestic thing, which seemed like for me, where I wanted to move during this current moment with COVID-19.

Matt:

So how did your experience in Sierra Leone affect your decision to get involved with the CDC?

Alexia:

After a year, Ebola came to Sierra Leone and I hadn't really... no, I don't think anyone really had a lot of knowledge of Ebola, especially those of us living in the States. And so that did kind of kick me into reading articles about Ebola. And then naturally I wanted to see if there were any mathematics papers around Ebola. So I read this specifically, the first paper I read was this very interesting paper about modeling Ebola transmission through the communities to try to predict maybe where there would be outbreaks and future outbreaks. And I thought, wow, that's such a cool way to take math and apply it to the real world and have it make a positive impact. Like if you can correctly predict where these clusters are, you can go in and try and do some interventions. So I read that and coming back to the United States after Peace Corps, having it be sudden, I was thrown off, I wasn't sure what I was going to do next.

Alexia:

I had kind of already decided I was bad at teaching, so I didn't want to do that anymore. I actually reached out to my old supervisor at the Department of Mathematics at Fordham. And I reached out to him, his name is Dr. Golec, and I told him what I was doing. And I told him maybe I was interested in pursuing a master's in math or something to further my math career. And I told him I was kind of interested in these other aspects of math that have to do with application and helping people. And he

kind of reaffirmed that he thought I should, if I wanted to stick with math, to try to make sure that I could keep a like person component in there, because he knew that another passion of mine besides math was connecting with people or helping people.

Alexia:

And so I held that that just like confirmed it a hundred percent. And I was like, I'm going into public health. I'm going to figure out a way to use math in public health. And so I took an online free course in biostatistics and really liked it and decided that I wanted to pursue a master's in biostatistics. And that's how I ended up in Atlanta getting my masters.

Matt:

Why did you need a master's? I mean, just explain that for... Some students might be sitting here listening like, hey, I've learned enough, maybe end up applied stuff now as a student, what went into that decision to actually pursue that extra degree?

Alexia:

Yeah, that's a really good question. And it was a question I actually paused on a lot when I was considering my next steps after Peace Corps. I'm still close with a good number of people from the math department, from my cohort. Specifically, one person decided to pursue a PhD in mathematics, but then I had another friend who is now like high up data scientist, and didn't go do any furthering for school, just went straight from bachelor's. And so I had talked to both of them about whether going back to school was something that they liked or didn't like, or if it was useful or not useful. And obviously they came back with their biased answers, which was definitely go back to school, and like, you don't need to go back to school, you can learn skills on the job. And both of them are super successful. And so it was not helpful to get those two perspectives for me, but it was nice to know that I probably couldn't go wrong.

Alexia:

So then I emailed a few professors in the biostatistics department with the master's I was interested in and asked them, and they were super honest with me. They said, at the moment, you probably wouldn't get a biostatistician role without a master's in biostatistics. But it became clear that if that really was the career path I wanted to pursue, that getting the master's was important to move up in my career at least.

Sara:

What does a typical day look like for you, or is there not a typical day?

Alexia:

It depends kind of where you end up. So in my first job that I got after my grad school, which was in global health, I would say every day was very, very different. I was the only statistician in my group in my team in my branch. And so I was part of many different things from writing protocols and the method sections for studies to helping with the actual data collection tools, to doing data analysis and data cleaning, writing manuscripts. So it was kind of all over the place. I think where my math skills kind of come into play is a little bit of everywhere. When you're developing a study, for example, you need to know how many people should be in that study. So then you think about, okay, well, what outcomes are you trying to quantify? And then you use those skills taught to you, or you Google things on the internet

to figure out what equations you need to work through to find the ideal sample size, or if you're doing analysis, someone says. Here's data. We want to know this question, what are the best statistical methods to get there?

Alexia:

And then on top of all of that, being able to communicate those things to people, which I think sometimes can be the hardest part, because then your brain is like, oh, it all makes sense. And then you try explaining it to someone and they don't understand it at all. And if no one can understand it, what's it all for? So I think that that was kind of the biggest learning curve for me, was being able to communicate math to others, even in a science field.

Matt:

That's interesting because that's one thing we try to stress in the Fordham education, right? That's why you go through those philosophy courses, right? How can you prove your point, make your argument? And what an interesting challenge it must have been to try then apply that to mathematics, not something everyone goes through as part of their core curriculum.

Alexia:

Right. Exactly.

Matt:

Did you get to... You went to Sierra Leone. Did you actually get to work on Ebola?

Alexia:

No, I went back at that point. So I went there in March of 2019, I think. No, I went back to help with looking at reducing maternal mortality. So the work I do or I did in global health was like either like nutritional work, sexual reproductive health work. I also did infectious disease work, mostly around like water and sanitation, doing surveillance work. So I kind of got to do a little bit of every public health bucket when I was the branch statistician there.

Sara:

Did you travel quite a bit or was that a lone opportunity?

Alexia:

Yeah. I really loved that because I did get to travel a bit and I got to connect with the local people to have conversations about how to best improve analysis and surveillance systems. And I think the best part of course, is learning how other places work and what they're doing, and having this mutual relationship of learning from each other, which was very similar to what at least I tried to do in Peace Corps as well. Being able to pull on those skills for my job was good.

Alexia:

But then I did realize when you're doing this global work, it's really great. And I think it's really useful to go to the field if you're going to be analyzing the data that's coming from the field, but it's not... it wasn't like too heavy, heavy in math. It was mostly trying to figure out what math you could use on this data or on this situation. And so I moved from this global health world into this domestic side specifically

because my current job is more around developing the mathematical methods for something. So it's a little more math heavy, which is something I was looking for in kind of like the next step in my career.

Sara:

Do you think you'll pursue a PhD? Do you think you need to, or is that not on the radar?

Alexia:

I don't know. I'm not sure, honestly. I think if I stay at the CDC, there might be need to get a PhD because many of the people at the CDC have PhDs or MDs. And so it's this kind of like high level, degree-based place. And if I want to further in that way, I think about it a lot, but I also don't know if I want to stay in government work forever. I think about either if I want to stay in government, even like going down to like a state health department, I think there's just so much out there, or getting more into the research-based, even going back into academia without getting my PhD would be interesting. Maybe even transitioning into not public health, because these math skills are so applicable in so many different fields. I know my friend just got a job in insurance, so there's just so many opportunities. So I'm not a hundred percent where I'm going to go next, just want it to be in math.

Sara:

Well, it's nice to hear that there are so many avenues. Math is everywhere and sort of infiltrates a lot of different industries, so if you do want to make a change, there are a lot of opportunities.

Alexia:

Exactly.

Matt:

So is being a math teacher an option?

Alexia:

I mean, you know what, if I get further in my career and when I get closer to kind of retiring age, I definitely think I would consider going back into teaching, I think once I have a little more... once I get kind of like the young jitters out of me of wanting to do methods and get really intense with theory in the high level application, and maybe get a little more patient.

Sara:

You also don't have to teach middle school math in a foreign country either. You know what I mean? I'm sure there're other experiences that would be more positive.

Alexia:

No, that's a good point. My cousin is actually a technology teacher and science teacher, and every time we talk he's like, "Are you ready to come teach math yet?" I think there is such a need for a good math teachers out there, but we'll see, it's not off the table.

Matt:

We have a need for good biostatisticians at the moment too, anyway, right?

Alexia:

Right. Yes. Correct.

Sara:

What about moving to Atlanta? I mean, that was obviously part of the deal, right? You're going to come work for us. You're going to move to Atlanta. Was that hard for you to make that jump or you were open to going where the work was?

Alexia:

Yeah, I'm pretty easy when it comes to living. All my family's in California, my friends are scattered everywhere, which is super cool. And something that I do love about Fordham was like, when you go to a school in a city, a lot of people stay so you'll have plenty of people to see when you go back. But because it is New York, people want to go experience other things as well. And I'm one of those. I'm happy to live anywhere, see any experiences. So I would move for a job or a next step easily. But I do love Atlanta. It's a great city, highly recommend if someone's trying to consider it, but yeah, I'm looking to go anywhere or do anything.

Sara:

And it sounds like maintaining your network has been really helpful for you, being able to go back to Fordham and contact those supervisors and math professors that you had. So, that's really helpful, I think, for people listening to know that even as time goes by, they're still a great resource to tap into and they can still help you on your career path even though you're not still a student.

Alexia:

Yeah, definitely. I mean, Dr. Golec and Dr. Ryham from the math department have been, not just professors but mentors and almost friends at this point because they are people that I still try to keep in touch with and talk to. And they're so, so smart that they just inspire me too, when I keep up on their research and what they're doing, even if it kind of mostly goes over my head, it's still nice to just kind of see what they're doing. And yeah, there's a good amount I would have to say of Fordham professors, maybe not even in the math department, that I would feel semi-comfortable reaching out to because they came across in such genuine ways when they were teaching that I feel like I could be like, you probably don't remember me, but I remember this about you, and I have a question. And I feel like they would be happy to follow up.

Sara:

Did you have any internships or summer jobs that were in the math field when you were a student?

Alexia:

I was a math grader for the math department. So my junior and senior year I got to grade the lower classes and their homework, which was fun and kind of gave me my first insight into teaching. And I really liked grading papers, although I did, at certain moments, have those low patience where I would read an answer and I would be like, you're wasting my time by making me read this.

Matt:

C'mon, freshmen.



Alexia:

Freshmen. Exactly. But that was really great. But besides that, I volunteered for different programs that did tutoring.

Matt:

You did CitySquash, right?

Alexia:

I did CitySquash. Shout out, they were great. I did Let's Get Ready. They were like a SAT prepping course. And that was fun to help prep on math SAT stuff, because I love that.

Sara:

And you were a dancer.

Alexia:

I was, yeah.

Sara:

Talk about that a little bit.

Matt:

Expressions Dance Alliance. What's that about?

Alexia:

Expressions Dance Alliance. Yes. When I was in undergrad, I was very involved in Expression Dance Alliance, just a little dance company at Fordham that anyone can audition for and then you go through it. So it's very similar to a company, but very kind of low stress, low stakes. And then every year we would put on a show that had choreography by other people in the company. So everything was student choreographed and student danced, and it was great. I made some of my best friends in that group and it kept me probably more in shape than if I had just done nothing, which I guess is my other option. It was a really, really, really great community to lean on. It was also connected in some ways to the other art groups, like the singing groups, Matt Burns can tell you about that.

Matt:

What? The Hot Notes. Did someone say the Hot Notes?

Alexia:

And then all the other theater groups, too, which Matt Burns can also tell you about. It was nice to have that kind of little community outside of the math department.

Matt:

Do you have any artistic outlets right now, or any desire for one?

Alexia:

Yeah. I mean, when I first moved to Atlanta, I found basically an adult dance studio, which was super great. And I learned it from one of my CDC colleagues. She was like, "Oh, you used to dance?" So I go to this adult dance studio. And so there it's really awesome. It's literally adults of all ages, people in college, all the way to people who are retired, and all types of dance. So luckily that exists for me here. That is something that I think is nice about a big city, is kind of having those niche outlets that I can get into. That's been really great, that I've been dancing a lot in my apartment since COVID.

Matt:

I was going to say, so I guess that was probably put on pause with the pandemic.

Alexia:

Yeah. They're doing online. There are online videos kind of things, which has been nice and great. And I guess I feel less silly to try things, but then I also feel less appreciated because I can't show off my moves to other people. Kind of pros and cons there.

Sara:

Do you have any advice for current math majors or just Fordham students in general as they embark on their career paths?

Alexia:

Wonder what I would say to myself if I were still in college. I would say don't be afraid to make connections with your professors. I think those have been really useful for me. I know sometimes it feels like they're busy and they have so many students, but if you take the time in to go to office hours and ask questions, that was the best thing I did. I mean, the classes that I was even struggling in, I just started going to office hours and that created, first, just a connection between me and the professor and I, and then it almost made it easier for me to pay attention in class. So I think never be afraid to go to office hours or make connections.

Alexia:

And there's a lot more out there. I think when I was getting my degree, I didn't look into other options. It was just like, I'll teach it or I'll go get a master's in it. It wasn't, what else can this be applied to? And so take some time. We have Google. Take sometime Googling, maybe other avenues, ask your professors what they've done if you're interested in next steps for careers.

Matt:

Talk to some alumni.

Alexia:

I was going to say, and of course use your resources, your alumni resources. I think that's what I would tell myself if I was still in there going through this.

Matt:

Well, Alexia I think that's all we have for you. Thanks so much for taking the time to chat with us today.

Alexia:

Yeah, of course. It's been great chatting with both of you. Hopefully I didn't bore anyone too much with my math talk, but-

Sara:

No, you were great.

Alexia:

It was great for me to talk about it.

Sara:

Well, that's another edition of Fordham Footsteps.

Matt:

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