Karen Diaz considers herself lucky: she gets to experience firsthand the incredible way that electronics, mathematics, and physics work in harmony. As a student at Central Carolina Community College (CCCC), Karen initially completed an associate of applied science program in electronics and computer engineering technology. Upon earning her degree, Karen decided that an additional degree in laser photonics would offer an even broader spectrum of job opportunities, so she continued at CCCC, ultimately earning an associate degree in lasers and photonics technology. Once she enrolled in the program, she found herself fascinated by what she was learning. “I took the chance to try something new,” she says, “and found that I loved it.” Karen was also eager to take advantage of the many opportunities available to women in technology. “As a female,” she explains, “there are so many opportunities for me in the engineering field. At the time I graduated, photonics seemed to be an up-and-coming field with lots of options.”

On taking risks: “I took the chance to try something new and found that I loved it.”

While Karen was enrolled at CCCC, she also focused on gaining valuable work experience. At first, she worked as an information and communication intern for Progress Energy, where she did everything from building a relay-testing panel to designing electrical schematics. Later, she worked as a contractor for both Power Equipment Maintenance and The Atlantic Group. As a contractor, she calibrated plant equipment and performed maintenance activities. The variety of experience she gained confirmed her suspicions that photonics was the right subject matter for her. “This field is so broad,” she explains, “that I have found myself in situations where I have to apply the knowledge that I learned in electronics and computer engineering.” By the time she graduated in May 2012, she was ready to advance her career and continue her education.

Currently, Karen is pursuing a bachelor’s degree at Duke University, where she works as an intern in the photonics and spectroscopy lab. Karen’s internship has given her additional experience in Python and MATLAB programming, optics handling, and components testing. At Duke, Karen is able to apply everything she has learned in her education so far, including electronics engineering, computer engineering, and laser and photonics technology. One of the things she most appreciates about her photonics career is the opportunity to face something new and interesting every day. For example, she is currently working on the revolutionary MOSAIC gigapixel camera. “I am proud to be involved in such a revolutionary project,” Karen explains. This camera “can potentially change the way we take photographs, as well as the media industry.”

Karen believes that students considering a career in photonics will be amazed by the many opportunities that the field offers. She acknowledges that many students are intimidated by the amount of physics and mathematics involved in photonics. Initially, she, too, was worried about her physics courses, but she stuck with them and now says that physics is “really not that hard.” She urges those interested in a technical field to stick with their studies so that they can see all that photonics has to offer.

Karen has been offered the opportunity to work in Research Triangle Park, but she has decided to focus instead on earning her bachelor’s degree. She believes that a bachelor’s degree will give her career an extra boost and allow her to advance more easily.

Karen lives in Durham, North Carolina. She happily dedicates most of her time to her education and her work, but in her spare time, she enjoys reading and watching movies with her family.