Laura Coyle, PhD, 2014

What influenced your decision to attend graduate school at OSC?
I was interested in studying optics in graduate school, so of course OSC was on my list due to its strong reputation in the field and large alumni network. When I visited campus for the graduate student recruitment weekend, the combination of the high-quality, diverse research programs and strong graduate student community made my choice clear.

Which classes did you find most enjoyable? Which ones did you find most difficult?
My favorite classes (which were also the most difficult and produced the most learning) were related to the practical application of optics. OPTI 523, Jim Burge's Opto-mechanical Design course, provided an excellent introduction to 'real world' optical engineering—from setting requirements to holding design reviews to performing detailed analysis. Each project provided a unique, open-ended challenge for students to work in order to find a solution and then defend the chosen approach.

OPTI 524, Matt Dubin's Optical Systems Engineering class, took these lessons a step further by requiring students to build the hardware systems they designed to solve a problem using optics (tracking a blinking LED on a remote-control car driving around the mall from the 8th floor of Meinel or shutting off a pottery kiln at the correct temperature using measurements of the blackbody curve)—often with a good deal of learning through failure. Matt used to say one of the goals of this class was to have students say 'Well, I'll never make THAT mistake again.' These classes did an excellent job of preparing me for a career in industry and I apply these lessons constantly.

Was there an individual (professor, advisor, staff, friend, family member) who played a particularly important role in your education?
I was fortunate to have support from many professors, staff and classmates—the OSC community is truly a special one. One of my advisors, Matt Dubin, truly went above and beyond as an advisor and mentor—we used to joke that our weekly one-hour meeting was almost guaranteed to take three hours since any time it seemed like I was unsure of what I was talking about, I would 'step up to the board' for a mini-oral exam that would result in far better understanding. Matt not only taught me a good deal about optics, but also how to approach a problem critically and how to ask the right questions.

The support of fellow graduate student, and eventual husband, Zach Newman, was also quite important.

What was your research while attending OSC?
I was a member of the Large Optics Fabrication and Testing (LOFT) group. My research focused on alignment and metrology solutions for large optical systems using computer generated holograms.

What was the cost of rent in Tucson while you were in school?
I paid about $600/month, a bit high at the time, but I preferred to live in a house close to campus (Sam Hughes neighborhood). Roommate and fellow OSC graduate, Stacey Sueoka, remains one of my closest friends.

If you owned a car during graduate school, what year and model was it?
2009 Subaru Forester.

What was your favorite restaurant/student hangout near campus?
To this day I visit Time Market whenever I'm in town for wood-fired pizza. Other favorites include Cafe Poca Cosa for special occasions, Prep and Pastry for delicious brunch, 47 Scott for cocktails and Barrio Bread for, you guessed it, bread. Tucson has so many amazing restaurants and I've heard it's only getting better with time. Luckily, University/Downtown/Congress were only a short walk from campus.

What did you do for fun during your time in graduate school?
I played in the Tucson Ultimate Frisbee League, played on the OSC Soccer and Basketball Intramural teams, horseback rode at a local barn, participated in local trivia nights and participated in pretty impressive brunches and

potluck dinners with fellow grad students.

At the time of your graduation, what were the most sought-after jobs/most popular industries/most popular companies?
Silicon Valley companies—Apple, Facebook, etc.—were hiring heavily. However, I knew I wanted to continue working with large optical systems, so my interest lay with aerospace companies - Ball, The Aerospace Corp., UTC, etc.

What was your first job after graduation?
I accepted an Optical Engineer position at Ball Aerospace. Over five years later, I'm still at Ball and very happy with my work—optical engineering for large space telescopes, like the James Webb Space Telescope and the LUVOIR mission concept.

Was there a campus or community event in Tucson that was especially important to you?
There's nothing like the Tucson All Souls Procession. The combination of community, art, and spirituality is a unique Experience.

What advice would you give to this year's graduating class?
Use the vast alumni network to explore potential career options and save your class notes—you never know when you'll need to revisit topics you last thought about during prelims.