



Louis Isabella

B.S. in Engineering Physics (2012)

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Describe your overall duties/responsibilities as a Laser Systems Engineer:

As part of the Laser Technology and Applications Group, I work on the research and development of novel laser systems in support of national security applications for the Department of Defense. I have worked on a variety of different fiber laser systems. Some of them have been more research oriented to prove that a concept works whereas others have been more engineering focused on building a prototype to deploy in the field. My duties involve being very hands on throughout the entire laser development cycle, from design and planning to building, testing, and improving on the laser.

Explain the skills/abilities that are required for being successful in your role:

Problem solving and being able to learn new skills quickly. Or more specifically knowing what skills you need to learn and being able to learn and apply them to whatever problem you are facing. Being able to work through problems in a team environment is also key. Nobody is expected to be an expert at everything,

but knowing where to go for help, especially at a place like the laboratory that has so many resources, is key. On a more individual level, lab and computer programming skills are always necessary.

What advice would you give to students who are considering majoring in Engineering Physics?

Engineering Physics was the best decision I could have made for my undergraduate education. So much of the laser fundamentals that I encounter every day are rooted in physics, yet having a strong electrical engineering background helps with actually going into the lab and building the laser. If you want to go into something that involves a lot of research and prototyping, I highly recommend engineering physics. Physics is at the heart of every engineering discipline, so if you want to go deeper in research an understanding of physics is very important. On the other hand, engineering skills teach you so much about how to make those ideas practical. The Engineering Physics program at Ohio State is so unique and will open up cross discipline opportunities that you wouldn't get by just picking one of them.

