

Kiva McCracken

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🎓 Education

B.S. Optics & Photonics, CREOL, University of Central Florida
2026 | Orlando, FL

- Constructed laser aligned optoelectronic systems using industry standard optomechanics, gaining industry applicable experience.
- Learned software skills such as MATLAB & Python to improve data processing accuracy. For example: Extracting wavelength from video of Michaelson interferometer translation.
- Taught CAD, rendering, and LaTeX in weekly workshops, filling in critical curriculum gaps at CREOL.

🏢 Experience & Organizations

Content Strategist I, Thorlabs
2026 - presents | Newton, NJ

Research Assistant, Dr. Jaesung Lee
2024 - 2026 | Orlando, FL

- Designed vacuum chambers & custom optomechanics using CAD & 3D printing, enabling fast project lifecycles and decreasing costs.
- Optimized Silicon nitride membrane fabrication protocol using wet etching & direct write lithography, culminating in cleanroom experience & device redesign.
- Created & led an emergency team to recover diamagnetic composite production after a scheduling breakdown during a \$1.2M grant deadline, enabling renewal and continued funding.

Photonics Camp Director, University of Central Florida
2024 - 2026 | Orlando, FL

- Taught optics & photonics principles to over 100 students using custom hands-on projects, increasing engagement.
- Increased photonics curriculum presence by creating custom PCBs, lowering cost of projects and increasing hands-on component.
- Managed communication via automated systems such as Qualtrix to save time & reduce errors, increasing parent satisfaction.

Contractor, Roots Engineering Services
2021 - 2024 | Hybrid

- Designed piping & instrumentation diagrams (P&IDs) to construct electro-pneumatic systems using industry distributors. Creating an educational framework for robotic material handling & processing.
- Created marketing & pre-vis materials for robotic systems using Blender & Davinci Resolve, aiding in the sale of a \$1.3M semiconductor manufacturing simulator.
- Automated workflows by programming UR-series cobots, validating educational systems, and supporting curriculum design.

Lifetime Member, Suncoast Science Center
2016 - 2021 | Sarasota, FL

- Taught hundreds of volunteers & users advanced manufacturing tools in hands on workshops & classes, standardizing lab training & improving volunteer teams capability.
- Managed sub-team as part of RC Car event senior committee, using roadmaps, breakout groups, & regular check-ins to accomplish all major builds ahead of schedule.
- Accrued 500+ hours of volunteer time, over the course of 5 years through lab projects/improvements, culminating in a Lifetime Membership Award as an alumni.

📜 Notable Certificates

- SolidWorks CSWP Professional
- NIMS CNC Mill Operations

For a full list of projects check out my website!