

Electrochemical Engineer Intern, Summer 2025

New Haven, CT | Full Time | On-Site

About Oxylus Energy

Oxylus Energy is a public benefit corporation founded in 2023 with a mission to displace fossil fuels through the direct conversion of CO₂ into carbon-neutral fuels and chemicals. Oxylus is developing cutting edge CO₂ electrolysis technology for the direct production of green methanol, reducing the energy requirement and enabling both onsite fuel production and carbon conversion. This solution has the potential to provide an economic pathway to decarbonization for the hard-to-abate sectors of aviation, shipping, and petrochemicals which are responsible for ~11% of global GHG emissions.

Oxylus Energy is located in New Haven, CT and is supported by top climate technology funders including Toyota Ventures, Azolla Ventures, Earth Foundry, and Connecticut Innovations. Joining us now is an opportunity to play a fundamental role in the development of our team and technology so that we can bring our transformative solution to market.

Job Brief

The *Electrochemical Engineer Intern* will work with the Oxylus research and development team and contribute to testing and scale-up of membrane electrode assemblies (MEAs) for Oxylus Energy's CO₂ electrolyzers. Primary responsibilities include testing the performance of MEAs under a range of conditions and diagnostic analysis for cell failure mechanisms. Throughout the internship term, the intern will receive in-depth training and mentorship from the Oxylus R&D team on state-of-the-art electrochemical technology development. This role directly reports to the CTO and/or a senior scientist.

This internship is a full-time, paid position for a duration of 10 weeks in Summer 2025. Exact start dates are flexible.

What You Will Do

- Perform electrochemical tests and work-up, analyze, and interpret results.
- Assemble MEAs and perform durability testing.
- Model fluid and thermal systems via COMSOL for electrolyzer scale-up.
- Maintain electrolyzer test stands.
- Analyze data and document results carefully.
- Design experimental plans and communicate progress with senior scientists.
- Collaborate with industry, government, and academic partner organizations on joint projects, with possible visits to nearby facilities and plants.
- Prepare presentations for diverse stakeholders.

Who You Are

- Currently enrolled as a Bachelor's, Master's, or Ph.D. degree student in chemical engineering, materials science, mechanical engineering, or a related field.
- Previous laboratory research experience. An electrochemistry background is a plus.
- Modeling experience with COMSOL.
- Detail-oriented with strong organization skills.
- Excellent communication skills, both oral and written as well as technical writing.
- Highly motivated and milestone-driven.
- Strong commitment and adherence to laboratory safety.
- Reliable, action-oriented, hard-working, and a team player.

We are convinced that the distinct contributions of each person fuel our success. To ensure our products and culture remain inclusive of all viewpoints and experiences, we uphold a policy of non-discrimination regarding race, religion, national origin, gender identity or expression, sexual orientation, age, as well as marital, veteran, or disability status.