

**Internship:** Lead a project focused on optimizing the energy efficiency of air handling systems

**Company:** SkyWater Technology Foundry, Bloomington, MN

The Minnesota Technical Assistance Program (MnTAP) is seeking a junior or senior college student to lead a project focused on increasing the energy efficiency of air handling systems and related components by optimizing the flowrates of exhaust collection, scrubbing, and ventilation equipment while also developing a regular maintenance interval for makeup air unit coil cleaning. Past experience with CAD software is desired. Prior experience in energy use or conservation is preferred, but not required. The intern will primarily work to identify means to optimize and implement energy efficiency strategies for the scrubbed air ventilation systems, makeup air handling systems, and their associated heating and cooling systems. The intern will also focus on determining a cost-effective regular maintenance interval for cleaning of makeup air unit coils.

### JOB DUTIES:

As part of this project, you will be asked to complete the following tasks:

- Understand the facility's current use and operating methods for the air scrubbers and HVAC systems, and how they perform in relation to what is required by the semiconductor fabrication tool components they serve.
- Identify, map, and investigate opportunities for undocumented tool exhaust systems through performance of air balances and flowrate right-sizing to achieve fan speed reductions.
- Test means for optimizing airflow through scrubbers that will prove feasibility of reduced air changes and control while ensuring indoor air quality requirements are met.
- Develop a plan for implementing reduced airflow at air scrubbers and HVAC systems.
- Construct a cost-effective regular maintenance interval for cleaning of air-handling coils.
- Quantify savings achievable through methods identified to optimize facility ventilation rates and coil maintenance efforts.
- Evaluate feasibility of methods developed to optimize these systems, and implement plans to achieve savings.
- Summarize findings in a detailed report, including recommended procedures and/or system changes along with an economic analysis and justification of any changes.
- Present findings to the company and at MnTAP-hosted public presentation events.

As an intern, you will work at the company and report back to MnTAP. The position is full time, 40 hours per week, for three months to start after the conclusion of spring semester or quarter. Pay is \$13/hour, with a lump sum stipend of \$1,000 upon completion of the project deliverables: a final report and presentations. Cumulatively, this equates to \$15.00/hour when averaged over the project. Candidates will need to pass a background check and be a U.S. citizen.

### QUALIFICATIONS:

- Cumulative GPA of at least 3.0
- Good oral & written communication skills
- A technical academic background
- Troubleshooting skills
- Self-motivated
- Excel and other software skills
- Appropriate majors: *Engineering, environmental or physical sciences and others as applicable*

### TO APPLY:

Apply online at:

[www.mntap.umn.edu/intern/student\\_apply.htm](http://www.mntap.umn.edu/intern/student_apply.htm)

Remember to submit your application form, cover letter, resume, and unofficial transcript.

Applications can be addressed to:

Nathan Landwehr, Intern Program Administrator  
200 Oak Street SE, Suite 350-1  
Minneapolis, MN 55455 • [landwehr@umn.edu](mailto:landwehr@umn.edu)

**MNTAP IS THE HIRING BODY: DO NOT CONTACT THE COMPANY**