

**Project:** Lead a project focused on energy and waste reduction in a plastic extrusion operation.

**Company:** Advanced Extrusion, Rogers, MN

The Minnesota Technical Assistance Program (MnTAP) is seeking a junior or senior college student to lead a project focused on energy and waste reduction in a plastic extrusion operation. The intern will work with Advanced Extrusion staff to: reduce energy usage in the extrusion process by reducing motor idle time, and improving scheduling of equipment; and understand how scrap is generated within the process and determine how the operation could be modified to reduce, reuse or recycle scrap.

### JOB DUTIES:

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

1. Record dew point data from desiccator, and determine optimal schedule for regeneration cycle with new humidistat controls.
2. Examine flow of material through crystallization process and determine best practices for reducing run time on crystallizers to decrease incomplete loading, warm up time and runtime when not in use.
3. Understand function and power usage of DC motors on extruders and determine if AC motors are more efficient and cost effective.
4. Determine maintenance schedule for dust collector, and explore alternate methods of decreasing dust caused by plastic fines.
5. Estimate reduction or diversion potential and costs associated with implementation of a recommended reduction opportunity, then prioritize suggested changes using simple payback methods to financially justify the alternative processes or equipment.
6. As appropriate, initiate approved changes and system upgrades and estimate the performance of upgraded systems.
7. Summarize findings in a detailed report, including recommended procedures and vendor proposals along with an economic analysis and justification of changes.
8. 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 must pass a background check.

### 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.

Cover letters can be addressed to:

Nathan Landwehr, Intern 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.**