



## Particle Engineering Laboratory R&D Paid Internship at Start-up Company- PARSEC Solutions LLC

Sept 2024 – July 2025

Purdue Research Park, West Lafayette, Indiana

Send resume to: Dr. Herman Snyder, [hsnyder@parsecsolns.com](mailto:hsnyder@parsecsolns.com)

A) Primary function of position:

Support custom pharmaceutical processing hardware creation and process development in the field of particle engineering conducted in industry supported start-up company environment.

B) Job Activities:

Primary responsibilities

- Use fundamental engineering principles to assist with custom hardware design, test setup and operation.
- Assist with design/commercialization of prototype components.
  - Atomizers/mixers/inertial separators/control systems.
  - Knowledge of computational fluids modeling a plus.
- Work with the team to identify and implement continuous improvements to prototypes.
- Perform data analysis.
- Write test plans and reports
- Coordinate testing requirements as needed.
- Work effectively with the development team and industry partners.

Secondary

- Execute operation of laboratory assays; including Karl Fischer, laser diagnostic droplet and particle size measurement techniques.
- Develop laboratory Standard Operating Procedures (SOPs).
- Develop formulation chemistry and feedstock preparation processes.

C) Requirements:

- Enrollment in the Purdue science, engineering or technology programs in the fields of chemistry/chemical, pharmacy/pharmaceutical, mechanical, aeronautical, or agricultural/biological.
- ‘Hands-on’ laboratory experience with the ability to operate in a flexible R&D laboratory environment.
- Ability to follow Standard Operating Procedures (SOPs) for experiments/assays/API handling.
- Experience with statistical data analysis and thermodynamics programs a plus (Ex. JMP/MatLab/EES)
- Previous internship/Co-Op experience in pharmaceutical/process industry a plus.
- Experience working with analytical lab instrumentation a plus.
- Strong communication and writing skills in English.
- Prefer graduate/upperclassmen or skilled sophomores.
- US citizen or appropriate VISA status for private company employment.

D) Time commitment:

- a. Part Time ~20/wk during spring and fall semesters, 40 hrs/wk during summer period in 2025.
- b. Flexible works periods around class schedule
- c. Majority of hours required between 8AM-7PM, at PARSEC lab facility in the Purdue Research Park, West Lafayette Indiana.