LumaCyte®

Innovate. Discover. Transform.

POSITION: Mechatronics Engineer

JOB TYPE: Full Time

LOCATION: Charlottesville, Virginia, USA

ABOUT LUMACYTE

Our values, passion, and drive are based upon the desire to help humankind better understand disease and to accelerate the development and production of life saving advanced therapies and cures faster than ever before.

LumaCyte, Inc. is an advanced research and bioanalytics instrumentation company that produces label-free, single cell analysis instrumentation where the use of antibody or genetic labeling is not required for cellular analysis. This revolutionary technology utilizes Laser Force Cytology™ (LFC™) to measure optical and fluidic forces within a microfluidic channel, quantitatively characterizing innate cellular responses of subtle phenotypic changes based purely on the intrinsic biophysical and biochemical properties of cells; which can be used to measure cellular changes in response to their environment or treatment. The univariate and multivariate nature of the data has enabled a host of big data strategies and cloud computing capabilities that drive advanced analytics, allowing a deeper understanding of cell based biological systems. Applications of LumaCyte's label-free platform technology include viral infectivity for vaccine development and manufacturing, cell health, activation, transfection and transduction analytics for cell and gene therapy development and production monitoring, CAR T-cell immunotherapy, iPSC differentiation, adventitious agent testing (AAT), infectious disease, and pre-clinical drug discovery, in addition to multiple applications across advanced therapy biomanufacturing for real-time quality control.

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JOB DESCRIPTION

LumaCyte is searching for a creative and passionate **Mechatronics Engineer**. In this position, she/he will be a key member of the LumaCyte team, focused on enhanced instrument design,

testing and validation. The ideal candidate is highly self-motivated, professional, and capable of managing their workload and prioritizing tasks. We are looking for someone who will enjoy a rapid paced and growing organization with the ability to expand their job description as well as additional opportunities long term.

Responsibilities include, but are not limited to:

- Design mechanical, electromechanical, microfluidic systems and products through the application of the principles of fluid and solid mechanics, thermodynamics, heat transfer, materials science
- Manage the manufacturing, testing, and support of analytical instrumentation
- Create and manage Solidworks part assembly and manufacturing drawing files
- Create and manage Bill of Materials, inventory and assembly documentation
- Confirm system and product capabilities by developing and implementing design validation and testing methods
- Research and integrate customer requirements, novel manufacturing and assembly methods and materials, and operator observations to enhance current products and develop new ones
- Assure system and product quality by testing finished-product and system capabilities to confirm proper fabrication, assembly, and calibration
- Contribute to the team effort by accomplishing related results as needed
- Liaison with machine shops, fabrication services, and Original Equipment Manufacturers (OEMs)
- Design PCB boards using Eagle for integrating electromechanical components and sensors

Skills & Requirements

- B.S. in Mechanical Engineering or a related discipline *(M.S. or M.Eng. a plus)*
- 2-5 years' industrial/commercial experience in manufacturing and design
- Strong technical reading and writing skills
- Strong knowledge and experience using SolidWorks or similar for creating 3D CAD models and 2D drawings
- Strong knowledge and experience using Eagle or similar for PCB design
- Knowledge of system level design
- Knowledge of Design for Manufacturability techniques and Ergonomics
- Demonstrated knowledge of and experience with 3D products and other novel manufacturing techniques preferred

- Experienced in computer aided design (CAD) software and file formats for traditional manufacturing (machining, hot embossing, plastics extrusion) and 3D printing is desirable
- Knowledge of microfabrication techniques (soft lithography, laser cutting, glass patterning / etching, and other) is desirable
- General exposure and understanding of computer programming with some experience in writing scripts using Lua or Python and one-off utilities (language agnostic) is desirable but not required
- Above average computer skills including word processing and spreadsheets
- Proven self-starter, good interpersonal and time management skills, and ability to work in a team environment

APPLICATION INSTRUCTIONS

Please email your resume to us at HR@lumacyte.com, specifying the desired job position title(s) in your email.

