

CONTRACT

Sr. Product Development Engineer

Job Reference: SPDE
Posted: April 2025

Location: Carlsbad, CA
Weekly Hours: 40 – 6 month contract

The Role

The Senior Product Development Engineer is responsible for leading the design and development of the cartridge, conducting experiments and interpreting results to meet design requirements.

Responsibilities:

It is expected that the Senior Product Development Engineer will perform the following tasks with minimal supervision as well as mentoring other engineers with these tasks:

- Define subsystem technical requirements, including translating from business and user requirements
- Contribute to risk management activities including but not limited to dFMEAs per ISO 13485.
- Evaluate design functionality through hand calculations, prototyping, and/or simulation
- Create SolidWorks CAD designs of complex parts of the cartridge and instrument, and drawings per ASME Y14.5
- Lead team in developing prototype fabrication/assembly methods and fabricate/assemble parts. This includes design and manufacture of assembly aids/fixtures.
- Lead team in developing/executing test plans, test protocols, scripts, data analysis, interpreting results and generating reports that test the design fluidically on a representative test rig
- Troubleshoot and debug fluidic, mechanical and control system problems with an understanding of assay workflow.
- Understand when to perform a deeper root cause analysis depending on issue severity
- Develop detailed experimental design plans and procedures for components at the unit, subsystem, and system levels
- Prepare, review, and deliver high quality technical reports and presentations for weekly data reviews and periodic design reviews.
- Support transfer of design to manufacturing by creating sufficient documentation (i.e. BOMs, assembly WIs, QC test methods, etc.)
- Plan projects with adequate resources to accomplish deliverables within tight timelines
- Actively contributes to completion of critical engineering team development program milestones.
- Proactively identifies technical/development risks and offer solutions. Escalate decisions as needed.
- Proactively identifies product solutions that will help lower time to result, lower cost, and improve robustness & reliability of system.
- Work in a highly cross-functional team with engineers, scientists, software, manufacturing, marketing, quality etc. (both in UK & US)
- Lead work with 3rd party development partners and suppliers as required to achieve technical solutions.

- Other duties as assigned

Person Specification

We are looking for people with a passion for their work - people who strive for exceptional results, but who can deliver pragmatic solutions on time. DNA Electronics' scientists and engineers enjoy and thrive on working in an interdisciplinary team but can also work independently and use their own initiative. The ideal candidate also likes to contribute to solving problems outside their field of immediate expertise and is an effective communicator.

Qualifications & Experience:

Bachelor's degree in an Engineering, Chemistry, Biology, or closely related discipline or working equivalent. MS is preferred.

Qualifications include:

- Strong Experience developing within medical device (or similar regulated industry) development processes including defining requirements, generating concepts/models, design reviews, risk management, prototyping, testing, and transfer to manufacture.
- Experience with using CAD tools to design or analyze complex parts and assemblies (i.e. SolidWorks)
- Strong troubleshooting experience with ability to determine root cause methodically and implement a cost-effective, robust solution
- Experience writing and executing test plans, protocols, and reports based off requirements
- Basic software scripting/coding experience required (i.e. Python)
- Practical experience with data analysis tools & ability to understand when different types of data analysis tools are used for different data sets (including statistical analyses and DOE; i.e. JMP).
- Organizational and project management skills as part of a large project. (preferred: Led a mid-size project to completion)
- Outstanding verbal, written, and documentation skills are required.
- Ability to assess and escalate issues as needed
- Excellent collaboration and interpersonal skills to work well with scientists and engineers having widely divergent backgrounds (i.e. able to clearly communicate technical knowledge).
- Experience with test rig design
- Practical experience designing for a range of prototype manufacturing and assembly processes
- Experience with plastic fluidic component design
- Experience with machine shop tools (e.g. 3d printer, CNC, lathe, laser cutter, mill, etc)
- Ability to understand biochemistry assay workflow
- (preferred) Experience working with integrated fluidic microsystems and associated instrumentation.
- (preferred) Experience with injection molding design
- (preferred) Experience with Simulation (i.e. COMSOL)

Location

DNA Electronics Inc, Carlsbad, CA



Apply

If you believe you meet the above criteria and would relish playing a key role in developing a revolutionary technology, we would be delighted to hear from you.

We offer a competitive compensation package to successful candidates.

Please email your CV and cover letter to: HR-US@dnae.com quoting

Your name and the job title in the subject line.

For more information about DNAe, please visit our website www.dnae.com

DNAe is committed to offering staff a competitive remuneration package, alongside compelling benefits. As the primary part of the process, we conduct a rigorous market data review where each role is individually benchmarked using a vast amount of recent data. The estimated base salary range for the Sr. Product Development Engineer role based in Carlsbad, California is: \$138,250 to \$156,500. Compensation decisions are dependent on several factors including, but not limited to, an individual's qualifications, location where the role is to be performed, internal equity, and alignment with market data. Should the level or location of the role change during the hiring process, the applicable salary range may be updated accordingly.

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