

Principal Mechanical Design Engineer

Job Reference: PME
Posted: October 2025

Location: Carlsbad, CA
Weekly Hours: 40

The Role

The Principal Mechanical Design Engineer is responsible for leading aspects of mechanical design and development of our diagnostic platform and associated projects within DNAe.

Responsibilities:

It is expected that the Principal Mechanical Engineer will perform the following tasks with minimal supervision:

Leading technical development: Create, review, & guide others to develop requirements, designs, documentation, prototypes, test strategies, and analysis/test reports. Proactively identify technical/development risks and offer solutions. Provide clarity and decisiveness to the team, given limited information, while escalating decisions where necessary.

Development planning & reporting: Create and manage realistic project plans that may have a 6+ month horizon, and significant uncertainty/risks/issues. This includes defining scope, deliverables, strategies, timelines, resources and budgets. Also guide others to plan & manage less complex projects.

Managing external partners: Where applicable, recommend & work with external development partners to define scope/deliverables, track progress and budget, and ensure their output meets DNAe's needs.

Other:

- Work closely with other engineering disciplines and teams (both in UK & US), in particular the science, software and commercial teams to ensure compatibility of designs/deliverables between projects in-line with company objectives.
- Set high standards of technical delivery. Implement ways of working to help the team develop quickly and efficiently, while maintaining quality.
- Mentor and line manage less experienced members of the team, and promote a positive, collaborative team environment
- Other duties as assigned (e.g. recruitment, transfer to CMO)



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:

In order to fulfil this profile (as a guideline only) we believe candidates will typically need a higher degree in Mechanical Engineering or Design Engineering with 10+ years' experience, at least 5 of which has been spent developing similar fluidics consumable products.

Technical Skills & Leadership:

- Significant experience in end-to end development of complex milli/microfluidic consumables (for diagnostic systems or similar). This includes generating concepts; creating detailed CAD designs that address requirements and consider the needs of all stakeholders; design reviews; risk management; prototyping, testing & test rig design; and transfer to manufacture.
- Advanced skills in Solidworks computer aided design.
- Significant experience in design for injection moulding.
- Able to recommend suitable rapid prototyping techniques, suppliers, and test methods to match design & development goals.
- Proficient with root cause analysis & resolving complex technical problems across disciplines.
- (preferred) Proficiency with FEA software (preferably Comsol) and hand calculations to analyze design performance.
- Experience guiding more junior team members in the above, and as a reviewer.

Non-Technical Skills:

- Experience developing within medical device development processes (ISO 13485); can guide others on good practice, identify gaps and suggest improvements
- Able to discuss technical subjects with non-technical stakeholders at a level of detail appropriate to them.
- (Preferred) Awareness of user, business, regulatory needs associated with sample-to-result diagnostic systems
- (Preferred) Basic understanding of assay development methodologies towards medical device designs
- (Preferred) Experience overseeing third party work and deliverables



It is expected that the successful candidate for this role is comfortable leading others, reviewing work, and thinking on a strategic/system level. They can draw on their experience developing similar systems to identify potential risks and solutions in the designs. They can question the brief they have been given and offers solutions to the 'job to be done' rather than addressing only the original ask. They may be starting to think outside of project work towards business process improvements and line managing/career coaching others.

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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 Principal Mechanical Engineer role based in Carlsbad, California is: \$175,000 to \$208,000. 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.

DNAe, Inc. is committed to a policy of Equal Employment Opportunity with respect to all employees, interns, and applicants for employment. Consistent with this commitment, our policy is to comply with all applicable federal, state and local laws concerning employment discrimination. Accordingly, the Company prohibits discrimination against qualified employees, interns and applicants in all aspects of employment including, but not limited to: recruitment, interviewing, hiring (or failure or refusal to hire), evaluation, compensation, promotion, job assignment, transfer, demotion, training, leaves of absence, layoff, benefits, use of facilities, working conditions, termination and employer-sponsored activities and programs, including wellness, social and recreational programs. Employment decisions will be made without regard to an applicant's, employee's, or intern's actual or perceived: race, color, religion, sex (including pregnancy, gender identity, and sexual orientation), national origin, age (40 or older), disability, genetic information, or any other status protected by law.
