



# What can we develop together?

## 1. ABOUT CRUX

Crux are world-leaders in the design, simulation and analysis of medical devices and consumer products; working as a trusted partner to many medical companies and household brand names, our projects touch lives by delivering a vast array of products to global markets.

## 2. SENIOR/LEAD APPLIED SCIENCES ENGINEER (CFD)

We're on the lookout for exceptionally talented individuals with a relevant engineering degree (Mechanical, Aerospace, Materials) or similar (Applied Physics, Data Science, Maths, etc.) to join our Applied Sciences team. This role offers a unique opportunity to help shape the future of engineering within the medical devices and pharmaceutical industry, applying advanced simulation techniques to solve complex challenges.

As a Senior Applied Sciences Engineer with a strong focus on Computational Fluid Dynamics (CFD) and Finite Element Analysis (FEA), you will lead high-impact projects using STAR-CCM+ for CFD and Abaqus for FEA. This role involves applying advanced simulation techniques and providing strong engineering insights across a range of challenging projects in the medical and consumer product sectors. You will oversee the technical work of junior engineers, manage team development, and play a key role in project execution from start to finish.

### 3. PRINCIPAL RESPONSIBILITIES

- Lead advanced CFD simulations using Star-CCM+.
- Execute detailed FEA studies using Abaqus, focusing on structural integrity, material behaviour, and stress analysis.
- Demonstrate complex mathematical modelling and simulation expertise across diverse projects.
- Rapid prototyping, lab testing, and design of experiments to validate and refine engineering solutions.
- Proficient in CAD for generating concepts, detailed design of components, and creating technical drawings and manufacturing specifications.
- Prepare high-quality technical reports and comprehensive design documentation.
- Confidently communicate project value to clients and stakeholders, demonstrating technical authority.
- Build strong client relationships and identify new business opportunities and referrals.
- Lead a team of Applied Sciences engineers, guiding them to successfully realise technical solutions.

#### Line Management Duties

- Mentor and support junior staff, guiding them in their technical development and project tasks.
- Support the development of individual objectives for team members, with regular 1:1 sessions.

#### Additional Responsibilities

- Collaborate with the marketing and sales teams to develop presentation materials and participate in client pitches.
- Stay current with industry innovations, sharing new insights and techniques within the team.
- Contribute to Crux's ongoing improvement by suggesting and implementing process enhancements.

### 4. WHAT WE'RE LOOKING FOR...

#### 4.1 Essential:

- Degree in Mechanical Engineering, Aerospace Engineering, Applied Physics, or a related field.
- Proficient in CAD software for design, modelling, and technical drawing creation.
- Strong skills in computational modelling, particularly in fluid dynamics and structural analysis (preferably Star-CCM+ and Abaqus).
- Competence in coding (Python, Matlab) for data analysis and simulation automation.
- Hands-on experience in experimental testing, prototyping, and the design of experiments.
- Proven track record of problem-solving and a proactive approach to complex engineering challenges.
- Excellent communication skills and experience with client-facing roles.
- Experience in mentoring, reviewing technical work, and managing junior engineers.

#### 4.2 Desirable:

- Knowledge of materials engineering and manufacturing processes.

- Familiarity with medical device design standards and regulatory requirements.

## 5. WHY YOU'LL LOVE WORKING HERE

We're a dynamic and fast-growing engineering consultancy that takes pride in its outstanding work and supportive work environment.

As a member of our team, you'll collaborate with a diverse group of skilled professionals who excel in their respective fields. Our strong community is built upon effective communication and happy employees, collaboration in project work and regular social events are the norm.

Check out what an opportunity at Crux offers you: [Life at Crux](#)

If you're interested in working on multidisciplinary design projects, tackling some of the toughest briefs in the medical and consumer goods sectors, then we want to hear from you!



Interested? Email your CV and covering letter to [careers@cruxproductdesign.com](mailto:careers@cruxproductdesign.com) and add 'Senior/Lead Applied Sciences Engineer (CFD)' as the email subject.

For our privacy notice please see the following link: [Crux Privacy Policy](#)