**JOB DESCRIPTION**

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| **Job Title** | **Mechanical Analysis Engineer** |
| **Reports To** | **Engineering Manager** |
| **Function** | **Engineering** |
| **Version/Date** | **September 2025** |

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| **Company / Function**[Pearson Engineering Ltd](http://www.pearson-eng.com) is a world leading provider of counter-mine and combat engineering equipment. Our product range is wide and varied, including complex attachments for armoured vehicles and remote controlled mine clearance systems. The role of Mechanical Analysis Engineer fits within Product Design, one of the teams within the engineering function at Pearson Engineering. |
| **Job Purpose**Reporting to the Engineering Manager, the primary role is performing finite element analysis to support product development, structural integrity assessments, and design optimization. You’ll work closely with the design teams to ensure our products meet performance, safety, and reliability standards.  |
| **Key Responsibilities*** Develop and execute FEA models for structural analysis.
* Implementation of Pearson Engineering’s load cases.
* Interpret simulation results and provide actionable insights to the design engineers.
* Collaborate with cross-functional teams to validate simulation outcomes with physical testing.
* Optimize designs based on simulation results.
* Document methodologies, assumptions, and results in clear technical reports.
* Stay up to date with the latest FEA tools, techniques, and industry.
* Support root cause analysis of failures using FEA.
* Contribute to continuous improvement of simulation workflows and best practices.
* Lead and/or support in-house training programmes, as required.
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| **Personal attributes*** As a defence contractor, we have a number of security obligations placed upon the Company. As a result, all our staff must be able to successfully achieve the relevant security clearances.
* Acts with honesty/integrity to build trust, respect, and commitment in the workplace.
* Self-motivated, proactive and results driven approach to work.
* Ability to investigate and interpret data, issues, and situations, to make sound decisions.
* Demonstrates strong interpersonal awareness and considers the thoughts, feelings, and emotions of others.
* Communicates effectively, both verbally and in writing.
* Ability to work to deadlines whilst maintaining high quality.
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| **Qualifications and Other Requirements*** A minimum of a 2:1 degree in Engineering or equivalent relevant subject.
* Experience working in Ansys Workbench, Mechanical, and Spaceclaim.
* Experience with 3D CAD and PDMs systems. Autodesk Vault and Autodesk Inventor preferred.
* Experience working in other analysis packages, including but not limited to Algoryx Momentum would be considered beneficial.
* Experience analysing plated structures, welded fabrications, pin jointed assemblies, bolted joints, and with buckling analysis.
* Experience with non-linear analysis would be considered beneficial.
* A strong understanding of the fundamentals of stress analysis, material properties, and solid mechanics.
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| **Working Conditions*** Mainly office based with visits to external customers (both UK and overseas) from time-to-time.
* Working conditions whilst on customer sites may include working outside of normal business hours and being required to work in inclement/uncomfortable field conditions.
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