

# R&D Engineer Job Description

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- Lead all phases of product research, design, development, and testing for new and existing products
- Support manufacturing team with troubleshooting during production ramp up.
- Compile and analyze data to identify areas for innovation and improvement.
- Research latest advancements in materials, processes, and technologies that can be utilized in product designs.
- Monitor products in the field and analyze returned products to recommend design modifications.
- Conceptualize and design innovative products and subsystems using CAD software and modeling tools.
- Write detailed design specifications and requirements for use by engineering teams.
- Stay current on the latest technologies, regulations, and competitive offerings.
- Develop prototypes and oversee prototype fabrication with the help of technicians.
- Set up experimental tests and collect data on prototype performance under varying conditions.
- Perform failure mode analysis and use results to improve product reliability.
- Identify cost-effective materials, methods, and production processes
- Work with quality engineers to implement robust product testing
- Provide technical guidance and mentoring to junior engineering staff.
- Oversee integration of mechanical, electrical, software and other components into complete end products
- Execute product validation testing at each stage to verify requirements are met
- Document all aspects of the design process using design reports and technical specifications

- Develop budgets and schedules for R&D projects. Track progress and costs.
- Lead design reviews and present recommendations to senior management.
- Foster relationships with academic institutions and vendors to enable collaboration.
- Obtain regulatory approvals for new products when required.
- Ensure engineering projects comply with quality standards, regulations, and safety requirements
- File and secure patents related to new innovations.