



Development Engineer – Job Description

(Job Code and Level: EDESDEV003)

Definition:

Development is defined as: Develop systems, processes, methodologies as well as component and vehicle development to enhance the overall vehicle performance for the customer and environment. Transforming concepts into prototypes for testing, validating and improvement for ultimately mass volume production. This includes achieving costs, timing and quality requirements.

Each level of Engineer builds on the level below as experience and learning enables more complexity and responsibility within the role.

Overall Purpose of the Role:

Responsible for the development and validation of products, systems and components. Analysing and directing recommendations for problem resolution to the expectation of the client. Work to improve the performance and efficiency of existing products. Provide support to new-business and vehicle-launch teams. Work on many phases or sub-tasks of large projects working under instruction of technical lead engineer or entire projects of moderate complexity. Works under general supervision, reviewed at project milestones and on completion. Plans projects or subtasks so they may be tracked and presented. Results impact project/programme completion.

Key Responsibilities:

General and Task Management

- Analyse customer product specifications and applicable regulations /legislations for their area of the programme
- Define the product functional analysis (based on standard) to translate customer specifications and internal requirements into clear product performance criteria
- Agree the material choice proposed is able to meet mechanical performance requirements

- Support the creation and maintenance of process documentation associated with the analysis process
- Give the necessary inputs to the Design Engineer to ensure that the design meets the defined performance
- Support the Design Engineer with regard to specifications knowledge and product robustness if needed
- Participate in design reviews
- Participate in DFMEA processes (based on standards) and make sure tests that are identified as recommended actions are incorporated
- Subjectively and objectively assess component stability performance in a repeatable, safe manner
- Use vehicle based instrumentation to gather on-vehicle data
- Use tools to gather data on system performance
- Use gathered data alongside subjective evaluation to identify parameter changes to drive the desired change in system and vehicle performance
- Work closely with suppliers to determine parameter changes
- According to validation/measurement results, define necessary product improvements to meet the specifications
- Lead the product validations for their area of the programme
- Define, plan, and follow the product validations
- Define the product improvements to meet the specifications
- Interfacing with internal and external clients to deliver updates, design recommendations and analysis results
- Preparation of detailed technical presentations for both internal and client project engineering review
- Support reaching the quality, costs and delivery targets of the program
- Report all resulting data on their area of the programme,
- Support design review and contribute to achievement of Engineering Milestones as well as Customer Program Milestones
- Undertake special projects as required
- Contribute to continuous improvement activities
- Quality control of work by appropriate reviews
- Support and lead process improvement activities
- Write reports and present progress at project meetings and to clients
- Achieve goals within budget
- Conduct benchmarking studies to determine best practices/designs and future trends
- Attend various meetings and action/communicate instructions
- Produce written reports and make presentations
- Undertake continuous training and development
- Perform root cause analysis and resolve problems
- Lead and/or support technicians and trainee engineers
- Train people within own work group

Relationship Management

- Liaise and communicate with other departments, customers, suppliers and other service providers
- Be an effective team member, working with supervisor and colleagues to ensure smooth workflow with maximum output

Self Management

- Comply with the Health, Safety and Environmental Policies
- Assertive, optimistic, resilient and welcomes change
- Proactively contributes to the team and has a collaborative approach to working with others
- Is self aware
- Shows moral courage, openness and honesty in all dealings
- Good team-working skills
- Self-motivated, flexible, proactive and committed

Skills and Attributes:

- Independently determines approach to assigned tasks
- Analytical and numeracy skills
- Strong problem-solving skills with high attention to detail
- A creative, logical approach for generating new ideas and solutions, with the ability to transition through to part development
- A sound knowledge of computer aided design (CAD) software, technical drawings and 3D modelling
- An excellent grasp of engineering and design principles
- A knowledge of the qualities of metals and other materials
- Excellent communication and negotiation skills
- An understanding of manufacturing processes and construction methods
- Ability to plan and organise through several project stages
- An appreciation of wider business demands
- An awareness of the environmental impact of design ideas
- Strong PC skills, including Microsoft Project
- Able to effectively train his/her work group and effectively support work teams within the work group.
- Able to give effective presentations to general audiences and write convincing proposals and reports with all necessary backup material for department consumption
- Knowledgeable in some technical areas of the group's scope, or having demonstrated ability to achieve a high level of proficiency in a short period of time
- Involved in projects involving multiple people
- Ability to support group to achieve goals within budget
- Demonstrated fiscal responsibility
- Ability to work well with others in a team environment, providing input and feedback in a helpful manner

- Ability to effectively communicate organisational goals to team
- Able to interact well with vendors
- Able to exercise some latitude and technical judgement in deciding work methods

Qualifications and Experience Levels:

- Relevant manufacturing/engineering degree preferred, or ONC, A Levels, BTEC Diploma Level 3 or equivalent NVQ level 3 qualification
- Membership of an industry related Professional Body would be advantageous
- May require experience of using Auto CAD, Pro Engineer, CATIA V5, Unigraphics NX
- Understanding of legislation and standards
- An understanding of Lean Manufacturing
- Experienced with a number of systems. Becoming a subject matter expert in at least one area or system
- Working knowledge of a number of other areas of specialisation

Example roles this job description may cover:

- Validation Engineer