## Electromechanical Engineer

Applies electrical, electronic and mechanical principles to components and systems, including assembly, analysis, and documentation of results; construction of developmental assemblies, sub-assemblies and components; and quality testing. Supports and participates in the design, test, modification, fabrication and assembly of prototype electromechanical systems.

|                     | Level 1   | Level 2   | Level 3   | Level 4   | Level 5   | Level 6   | Level 7  | Level 8  |
|---------------------|---|---|---|---|---|---|--|--|
|                     | Electromechanical<br>Engineer l   | Electromechanical<br>Engineer II  | Electromechanical<br>Engineer III   | Electromechanical<br>Engineer IV  | Associate Principal<br>Electromechanical<br>Engineer  | Principal<br>Electromechanical<br>Engineer  | Sr. Principal<br>Electromechanical<br>Engineer   | Chief Engineer   |
| Discretion/Latitude | Work is closely<br>supervised. Follows<br>specific, detailed<br>instructions and/or<br>guidance from more<br>senior functional staff. | Works under general<br>supervision. Follows<br>established procedures.<br>Work is reviewed for<br>soundness of technical<br>judgment, overall<br>adequacy and accuracy. | Works under only<br>general direction.<br>Independently<br>determines and<br>develops approach to<br>solutions. Work is<br>reviewed upon<br>completion for adequacy<br>in meeting objectives. | Work is performed<br>without appreciable<br>direction. Exercises<br>some latitude in<br>determining technical<br>objectives of<br>assignment. Completed<br>work is reviewed for<br>desired results. | Work is performed<br>without appreciable<br>direction. Exercises<br>considerable latitude in<br>determining technical<br>objectives of<br>assignment. Completed<br>work is reviewed from a<br>relatively long-term<br>perspective for desired<br>results. | Works under<br>consultative direction<br>toward predetermined<br>long-range goals and<br>objectives. Determine<br>and pursue courses of<br>action necessary to<br>obtain desired results.<br>Completed work is<br>reviewed from a<br>relatively long- term<br>perspective for desired<br>results. | Works under<br>consultative direction<br>toward predetermined<br>long-range goals and<br>objectives. Assignments<br>are often self-initiated.<br>Determines and pursues<br>courses of action<br>necessary to obtain<br>desired results. Work<br>checked through<br>consultation and<br>agreement with others<br>rather than by formal<br>review of superior. | Works with Business<br>Areas in an engineering<br>leadership capacity to<br>uncover and resolve<br>issues associated with<br>the development and<br>implementation of<br>operational programs<br>and business pursuits.<br>Identifies, recommends<br>and aligns R&D<br>programs and<br>technological<br>applications to<br>accomplish long-range<br>business objectives.<br>Develops and maintains<br>the Business Area's<br>Technology Roadmap.<br>Work is reviewed only to<br>determine the<br>effectiveness of the<br>results obtained,<br>typically from a<br>short-term perspective<br>for operational issues<br>and a long-term<br>perspective for<br>technological alignment<br>to the Business Area's<br>strategies. |

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| Knowledge, Skills<br>and Abilities | Limited use and/or<br>application of basic<br>technical principles,<br>theories, and concepts<br>to specific job<br>assignments. | Frequent use and<br>application of basic<br>technical standards,<br>principles, theories,<br>concepts and<br>techniques. | Complete understanding<br>and wide application of<br>technical principles,<br>theories, and concepts<br>in the field. General<br>knowledge of other<br>related disciplines. | Applies technical<br>expertise, and has<br>detailed knowledge of<br>other related disciplines. | Applies extensive<br>technical expertise, and<br>has full knowledge of<br>other related disciplines.<br>Answers technical<br>questions regarding<br>products and services,<br>and may take part in<br>putting together<br>proposals,<br>configurations, and<br>product offerings. | Applies advanced<br>technical principles,<br>theories, and concepts.<br>Contributes to the<br>development of new<br>principles and concepts.<br>Identifies, analyzes and<br>develops new business<br>opportunities. Answers<br>unusually complex<br>technical questions<br>regarding products and<br>services, and takes part<br>in putting together<br>proposals,<br>configurations, and<br>product offerings. | Applies advanced<br>technical principles,<br>theories, and concepts.<br>Contributes to the<br>development of new<br>principles and concepts.<br>Widely recognized for<br>achievements, technical<br>expertise and<br>meritorious standing<br>within professional field.<br>Identifies, analyzes and<br>develops new business<br>opportunities.<br>Establishes customer<br>contacts, conducts<br>research and analysis<br>into their future plans<br>and needs, assist with<br>the development of their<br>specifications, develops<br>proposals, and delivers<br>marketing presentations. | Exhibits an exceptional degree of ingenuity, creativity, resourcefulness and technical leadership. Applies and/or develops highly advanced technologies, scientific principles, theories and concepts to meet the needs of the Business Area. Viewed as a leading expert in applying technology and solving operational issues in support of the Business Area's objectives. Establishes long-range marketing plans and technology Roadmaps for the Business Area's products and services by identifying, analyzing and developing new business opportunities. Establishes customer contacts, develops proposals, and delivers technical marketing presentations. Cultivates and maintains relationships with key decision makers. |

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| Problem Solving | Develops solutions to<br>routine technical<br>problems of limited<br>scope by following<br>standardized practices<br>and procedures.   | Provides solutions to a<br>variety of technical<br>problems of moderate<br>scope and complexity.  | Provides technical<br>solutions to a wide range<br>of difficult problems.<br>Solutions are<br>imaginative, thorough,<br>practicable, and<br>consistent with<br>organization's<br>objectives.  | Develops technical<br>solutions to complex<br>problems that require<br>the regular use of<br>ingenuity and creativity.  | Develops technical<br>solutions to complex<br>problems that require<br>the regular use of<br>ingenuity and creativity.  | Works on unusually<br>complex technical<br>problems and provides<br>solutions that are highly<br>innovative and<br>ingenious.   | Works on unusually<br>complex technical<br>problems and provides<br>solutions that are highly<br>innovative and<br>ingenious.   | Applies technology and<br>engineering and<br>performs a leadership<br>role to achieve the<br>Business Area's<br>operational and strategic<br>goals. Applications may<br>be diverse and include<br>newly developed<br>concepts, theories and<br>products, or engineering<br>discipline.  |
| Impact          | Contributes to the<br>completion of routine<br>technical tasks. Failure<br>to achieve results can<br>normally be overcome<br>without serious effect on<br>schedules and<br>programs. | Contributes to the<br>completion of milestones<br>associated with specific<br>projects. Failure to<br>achieve results and/or<br>erroneous decisions or<br>recommendations may<br>cause delays in program<br>schedules and may<br>result in the allocation of<br>additional resources. | Contributes to the<br>completion of specific<br>programs and projects.<br>Failure to obtain results<br>and/or erroneous<br>decisions or<br>recommendations would<br>typically result in serious<br>program delays and<br>considerable<br>expenditure of<br>resources. | Plans and conducts<br>assignments, generally<br>involving larger and<br>more important projects<br>or more than one<br>project. Erroneous<br>decisions or<br>recommendations would<br>typically result in failure<br>to achieve major<br>contract objectives. | Regularly called upon to<br>function in a project<br>leadership role.<br>Erroneous decisions or<br>recommendations would<br>typically result in failure<br>to achieve major<br>organization objectives. | Develops technological<br>ideas and guides their<br>development into a final<br>product. Erroneous<br>decisions or<br>recommendations would<br>typically result in failure<br>to achieve critical project<br>objectives. Leads the<br>planning and<br>implementation of large<br>projects/ programs.<br>Contributes to<br>department goals and<br>planning efforts. | Develops advanced<br>technological ideas and<br>guides their<br>development into a final<br>product. Erroneous<br>decisions or<br>recommendations would<br>typically result in failure<br>to achieve critical<br>organizational objectives<br>and affect the image of<br>the organization's<br>technological capability.<br>Functions in a program<br>leadership role. Plays a<br>key role in implementing<br>programs/projects, and<br>makes significant<br>contributions to<br>department goals and<br>overall functional<br>strategic planning<br>efforts. | Sets the technology<br>direction for the<br>Business Area and<br>corrects the course of<br>current errant<br>technology direction<br>when warranted.<br>Erroneous decisions or<br>recommendations would<br>have a long-term<br>negative effect on the<br>organization's reputation<br>and business posture.<br>Leads development and<br>implementation of key<br>programs and/or<br>processes for the<br>Business Area. |

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| Liaison                             | Contacts are primarily<br>with immediate<br>supervisor, project<br>leaders, and other<br>professionals in the<br>section or group. | Primarily internal<br>company contacts.<br>Infrequent<br>inter-organizational and<br>outside customer<br>contacts on routine<br>matters. | Frequent<br>inter-organizational and<br>outside customer<br>contacts. Represents the<br>organization in providing<br>solutions to technical<br>issues associated with<br>specific projects. | Represents the<br>organization as the<br>technical contact on<br>contracts and projects.<br>Interacts with external<br>personnel on technical<br>matters often requiring<br>coordination between<br>organizations. | Represents the<br>organization as the<br>prime technical contact<br>on contracts and<br>projects. Interacts with<br>senior external<br>personnel on significant<br>technical matters often<br>requiring coordination<br>between organizations. | Serves as organization<br>spokesperson on<br>projects and/or<br>programs. Acts as<br>advisor to management<br>and customers on<br>advanced technical<br>research studies and<br>applications. | Serves as organization<br>spokesperson on<br>advanced projects<br>and/or programs. Acts<br>as advisor to<br>management and<br>customers on advanced<br>technical research<br>studies and applications.<br>Often instrumental in<br>attracting and obtaining<br>major new company<br>business. | Serves as a consultant<br>to the Business Area's<br>top management in<br>long-range company<br>planning concerning<br>new or projected areas<br>of technological<br>research, advancement,<br>and the current<br>program's technical<br>performance. Prime<br>spokesperson on the<br>Business Area's<br>technical capabilities<br>and future direction.<br>Often instrumental in<br>attracting and obtaining<br>major new company<br>business. |
| Minimum Education<br>and Experience | 0-2+ years with BS in<br>designated Engineering<br>or related field.   | 2-5+ years with BS in designated Engineering or related field.   | 5-8+ years with BS in<br>designated Engineering<br>or related field.  | 8-10+ years with BS in<br>designated Engineering<br>or related field.  | 10-12+ years with BS in<br>designated Engineering<br>or related field.<br>Employees usually have<br>advanced degree in field<br>of specialization.   | 12+ years with BS in<br>designated Engineering<br>or related field.<br>Employees usually have<br>advanced degree in field<br>of specialization.   | 15+ years with BS in<br>designated Engineering<br>or related field.<br>Employees usually have<br>advanced degree in field<br>of specialization.   | 20+ years of broad and<br>extensive professional<br>experience with BS in<br>Engineering or related<br>field. Employees usually<br>have advanced degrees<br>in Engineering.  |