

Experimental Machinist

Plans the layout, fabrication and testing of mechanical devices; sets up and operates any type of precision machine tool to make original parts, tools, mechanisms and devices for experimental purposes. Solves problems relative to work-holding arrangement, unusual materials, machine settings, tools, product specifications and fabrication methods for production process. Normally performs precision work to exacting tolerances and dimensions for research engineers in a developmental laboratory condition. Some machines may be numerically controlled. May monitor and verify quality in accordance with statistical process or other control procedures. Typically requires completion of a formal apprenticeship and many years of precision all-around machining experience on unusual, original and intricate layout, machining and assembly tasks.

Level 1		Level 2		Level 3		Level 4	
Experimental Machinist I		Experimental Machinist II		Experimental Machinist III		Sr. Experimental Machinist / Sr. Lead Experimental Machinist	
Knowledge	Little or no knowledge of the job. Moderate understanding of general job aspects and some understanding of the detailed aspects of the job.	Full knowledge of the job. Substantial acquaintance with, and understanding of, general aspects of the job with a broad understanding of the detailed aspects of the job.		Considerable knowledge of the job. Complete acquaintance with, and understanding of, the general and detailed aspects of the job and their practical applications to problems and situations ordinarily encountered.		Extensive knowledge in specialized functions. A wide and comprehensive acquaintance with, and understanding of, both general and specific aspects of the job and their practical application to complex problems and situations ordinarily encountered.	
Supervision Received	Close supervision involving detailed instructions and constant checking on work performance.	General supervision and instructions given for routine work and detailed instructions given for new activities or special assignments.		Limited supervision. No instructions needed on routine work, and general instructions given on new lines of work or special assignments.		Minimal supervision. Work may be done without established procedures.	
Consequence of Errors	Errors can be easily and quickly detected within the immediate work unit and would result only in minor disruption or expense to correct.	Errors may be detected and corrected but may cause moderate loss of time or customer/user dissatisfaction.		Errors may be difficult to detect and would normally result in loss of customer business, material or equipment to resolve.		Errors are very difficult to detect and would normally require significant expenditures to resolve.	
Contacts	Contacts are primarily within immediate work unit. Contacts involve obtaining or providing information requiring little explanation or interpretation.	Contacts are typically with individuals within own department and occasionally with contacts outside own organization. Contacts involve obtaining or providing information or data requiring some explanation or interpretation.		Contacts are frequent with individuals representing other departments and/or representing outside organizations. Contacts involve obtaining or providing information or data on matters of moderate importance to the function of the department or which may be of sensitive nature.		Contacts are frequent with individuals representing outside organizations, and/or individuals of significant importance within the company. Contacts involve planning and preparation of the communications, require skill, tact, persuasion and/or negotiation to accomplish the objectives of the communication.	

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Work Products (Examples may include but are not limited to)	Use of ERP/MRP software. Work from written work orders, verbal instructions or blueprints, keeping all signoffs and inspection buyoffs current. Keep logs up-to-date as parts are machined. Maintain a clean work area daily. Use of Forklifts and or Pallet Jacks to move materials, tooling and load the machining centers. Set up fixtures on machine and dial in tooling balls. Must be able to select, set and load the correct cutting tools into the tool magazine. Dry run programs prior to production, look for errors and work with Machine Shop Lead to fix errors. Edit programs, regulate machine speeds, feeds, coolant, depth, etc. Run Production jobs on the Komo 5 axis Router. Assist in running the Breton Machines with Supervision. Use Surf Cam software to draw and create simple tool paths. Use of drill presses, lathes, grinders, sanders, etc.	Use of ERP/MRP software. Work from written work orders, verbal instructions or blueprints, keeping all signoffs and inspection buyoffs current. Maintain a clean work area daily. Use of Forklifts and or Pallet Jacks to move materials, tooling and load the machining centers. Set up fixtures on machine and dial in tooling balls. Must be able to select, set and load the correct cutting tools into the tool magazine. Dry run programs prior to production, look for errors and work with Machine Shop Lead to fix errors. Edit programs, regulate machine speeds, feeds, coolant, depth, etc. Run production jobs on all machining centers. Must have good knowledge of Fanuc and Siemens controllers. Use Surf Cam software to draw and create medium level tool paths. Use of drill presses, lathes, grinders, sanders, etc.	Use of ERP/MRP software. Work from written work orders, verbal instructions or blueprints, keeping all signoffs and inspection buyoffs current. Maintain a clean work area daily. Use of Forklifts and or Pallet Jacks to move materials, tooling and load the machining centers. Set up fixtures on machine and dial in tooling balls. Must be able to select, set and load the correct cutting tools into the tool magazine. Dry run programs prior to production, look for errors and work with Machine Shop Lead to fix errors. Edit programs, regulate machine speeds, feeds, coolant, depth, etc. Run production jobs on all machining centers. Must have advanced knowledge of Fanuc and Siemens controllers. Troubleshoot any problems that may arise with machining operations. Use Surf Cam software to draw and create advanced level tool paths. Use of drill presses, lathes, grinders, sanders, etc.	Sets objectives and standards of performance for all employees in his/her department. Lead production personnel to meet production schedules in a high quality and efficient manner. Assists, monitors and meets production budgets. Insures proper documentation is in use on production floor. Meets all company, safety and environmental and good housekeeping guidelines. Participates in the training and development of hourly employees. Initiation and follow-up of all personnel activities to include performance reviews and counseling. Interface with manufacturing engineering, engineering, design engineering, quality control, production control, personnel, stores and other support groups to solve production problems. Lead all aspects of Preventative Maintenance for all assets. Control scrap and excess material to acceptable levels. Ensure all personnel comply with security regulations as set forth by the FSO and Security Officer. Specify and Identify essential equipment. Other duties as specified by authorized company representatives. Maintains schedules and delivery promises according to the master schedule.
Minimum Education and Experience	High school diploma or GED equivalent. Must be proficient using a PC and related software. This position may require that the person can apply and pass the required criteria to obtain a Secret level clearance. Must be able to use and read scales, calipers, micrometers, etc.	High school diploma or GED equivalent. Must be proficient using a PC and related software. This position may require that the person can apply and pass the required criteria to obtain a Secret level clearance. Must be able to use and read scales, calipers, micrometers, etc.	High school diploma or GED equivalent. Must be proficient using a PC and related software. This position may require that the person can apply and pass the required criteria to obtain a Secret level clearance. Must be able to use and read scales, calipers, micrometers, etc.	Minimum of 3 years lead experience in a manufacturing setting. Understanding of company processes and procedures is required. Must be experienced in the manufacture of advanced aerospace pre-impregnated fiber structures and advanced blueprint reading. Strong written and verbal communication skills necessary. Adaptive interpersonal skills necessary to deal with diverse personalities and situations. Advanced experience in use of personal computers is required. 3 and 5 axis set-up, CAD CAM experience and machining experience required. This position may require DoD eligibility.