

Purpose and Scope:

The mechanical engineering assignments to support project development, design, installation, operations and maintenance of systems that are located at NASA's Kennedy Space Center, Florida. The specific types of facilities at which these systems are located include space flight hardware processing facilities, launch pad support facilities, power plants, Engineering and Administrative Support buildings and other types of industrial facilities. Projects range from simple single-discipline to complex multi-discipline.

Essential Responsibilities:

1. Must have a solid foundation in basic engineering principles.
2. Under some supervision, responsible for developing the concept, basis of design and technical design solutions to maintain operability of assigned systems and components
3. Support Developing team to plans, drawings, technical specifications, processes, procedures, functional and data requirements analysis, system analysis, and documentation preparation.
4. Support engineer and technician with HVAC systems and components – including multiple-zone VAV systems, simple constant volume systems, distribution systems (pumps, pipe, control valves, ductwork, diffusers and registers), air handlers (with coils and economizers), fan systems, central plant systems (boilers, chillers, cooling towers), packaged HVAC units, fume hoods and dust collection systems
5. Apply fundamental engineering principles to develop, design and resolve solutions to a variety of technical problems related to HVAC and facility mechanical systems and processes.
6. Support Fire Protection Engineering on technical approaches to maintain operability of systems and components and apply cost effective repairs, upgrades or replacements
7. Utilizing the Energy Code and ASHRAE and NFPA codes, standards and guidelines.
8. applicable NFPA codes and other industry standards.
9. Support Design of new and modification of various types of existing water-based fire protection systems and special hazard systems and components such as clean agent fire extinguishing systems; dry chemical extinguishing systems; wet chemical extinguishing systems; carbon dioxide extinguishing systems; fixed aerosol fire-extinguishing systems; quad-valve deluge systems; water-based sprinkler systems; standpipe and hose systems; stationary fire pumps and controllers, riser and cross connection piping distribution piping; and other related systems and components
10. Support other mechanical systems such as industrial equipment and machinery, steam systems, industrial pump systems, refrigeration equipment and plumbing systems.
11. Support and Perform field inspections of HVAC and other mechanical systems and attend system start-up field activities.
12. Coordinate with and support other Design Engineers, Operations and Maintenance staff.
13. Support the Configuration Management (CM) group to include the evaluation and monitoring of all modifications to configured systems and the generation of Engineering Change Requests to improve interoperability, reliability, and maintainability. Adhere to applicable CM standards. Update existing Configured Drawings to incorporate system modifications.

14. Ensure that assigned projects are completed on time and within approved scope and budget. Keep all involved personnel informed of schedule status.
15. Interface and coordinate with internal and external customers from project initiation and requirements development to design review and working group meetings in order to ensure compliance with project requirements.
16. Provides technical support to ROM (Rough Order of Magnitude) estimates for projects, as well as risk assessments to support proper project prioritization.
17. Prepare, deliver and submit technical presentations in support of planning efforts.
18. Verify and comply with engineering documentation standards and test procedures.
19. Perform other related duties as assigned.

Minimum Position Knowledge, Skills, and Abilities Required:

1. Bachelors of Science degree in Mechanical Engineering 0-1 years experience
2. Preferred some knowledge and experience of repairs, upgrades or replacements HVAC and Fire Protection System.
3. Working knowledge of computer systems and integrated software application programs.
4. The ability to investigate, troubleshoot, and design solutions to problems in operational hardware and software.
5. Good communication and analytical skills.
6. May require some limited travel.
7. May require the ability to pass and maintain a Security Clearance.

Work Environment, Physical Demands, and Mental Demands:

This position involves work typical of an office environment with no unusual hazards; occasional lifting to 20 pounds; constant sitting with use of computer terminal; constant use of sight abilities while reviewing documents; constant use of speech/hearing abilities for communication; constant mental alertness; must possess planning/organizing skills and must be able to work under deadlines. Field work will consist primarily of site walk downs in support of design projects and system trouble shooting Site hazard training and Personal Protective Equipment are provided.