

# ADVANCED FUSION SYSTEMS

## JOB DESCRIPTION

---

**TITLE:** Member of Technical Staff (Engineer II)

**DEPARTMENT:** Engineering

**REPORTS TO:** Director of Engineering

**FLSA STATUS:** Exempt

**EMPLOYMENT STATUS:** Full-time

---

### Position Summary

A dynamic startup located in Newtown, CT is actively seeking a motivated Electrical Engineer with 3 to 5 years of experience in power electronics and a focus on high voltage applications, including Marx Generators. Joining our team means becoming part of an innovative company focused on pioneering commercial projects and advancing electrical and mechanical engineering research and development. The successful candidate will be a hands-on engineer dedicated to ensuring the integrity, manufacturability, and scalability of our proprietary technologies.

This role is tailored for an early to mid-career engineer who aspires to grow within the organization and transition into a technical management position as we expand. Our ideal candidate will not only contribute technical expertise but also have the potential to drive team development and business growth.

### The core responsibilities of this position include:

- **Lead Design Projects:** Oversee design and project initiatives for new commercial endeavors, ensuring project success through hands-on involvement and support.
- **Engineering Support:** Provide engineering assistance for testing, quality assurance, and reliability of both existing and new products while ensuring compliance with regulatory design specifications.
- **Optimize Technology Utilization:** Enhance the efficiency of information access and support services while identifying and implementing innovative processes and technologies.
- **Mechanical System Development:** Specify, design, analyze, and test mechanical systems, facilitating prototyping and transitioning smoothly to manufacturing.
- **Problem Resolution:** Organize and collaborate with engineering and manufacturing teams to address design challenges, developing performance testing protocols to incorporate necessary changes.
- **Collaborative Interaction:** Foster effective relationships with internal teams and external vendors to align efforts towards company objectives.
- **Stay Informed:** Keep abreast of advancements in electrical and mechanical engineering technologies to inform design decisions.
- **Project Management:** Prioritize and manage multiple projects within established design specifications and budget constraints.

- **Aspirations for Growth:** Aim for career advancement into technical management roles, including potential progression to engineering manager or director.
- **Additional Duties:** Perform other related responsibilities as assigned by management.

#### **Minimum Qualifications (Education, Experience, Skills)**

- **Education:** BS Physics, BSEE, or BSME from an accredited institution.
- **Experience:** 5-10 years in an engineering role, preferably involving new product development.
- **Communication Skills:** Strong verbal and written communication abilities, including the capability to make presentations and collaborate effectively with vendors, customers, and team members.
- **Analytical Skills:** Excellent analytical and problem-solving skills, with a proven ability to excel in a team environment.
- **Technical Proficiency:** High-level experience with lab equipment, including oscilloscopes, meters, analyzers, sensors, and current probes, along with familiarity in using engineering software such as SPICE (fluency preferred), MATLAB, Design Master, and CST Studio Suite.
- **Design Knowledge:** Working knowledge of ECAD and MCAD systems, as well as experience with machine shops and CNC processes.
- **Electronics Understanding:** Strong understanding of power electronics, pulse power, magnetics (ability to design inductors and transformers), and control theory (including BODE analysis). Basic knowledge of electromagnetic pulse power is also required.

---

#### **Physical Demands and Work Environment**

The following physical demands and work environment characteristics must be met by an employee to successfully perform essential functions:

- **Communication:** Regularly required to talk or hear.
- **Physical Activity:** Frequently required to use hands and fingers to handle objects and tools. Duties may involve standing, walking, sitting, reaching, climbing, balancing, stooping, kneeling, crouching, or crawling.
- **Lifting:** Occasionally lift and/or move up to 40 pounds.
- **Vision:** Specific vision abilities required include close vision, distance vision, color vision, peripheral vision, and the ability to adjust focus.
- **Noise Level:** The work environment typically has a moderate noise level.

---

#### **Additional Considerations**

This job description is not exhaustive; it does not imply that the listed duties are the only responsibilities of the employee in this position. Employees may be required to follow additional job-related instructions and perform other duties as directed by authorized personnel.

To succeed in this role, incumbents must possess the necessary skills, aptitudes, and abilities to perform their duties effectively. Some requirements may preclude individuals who pose a direct threat or significant risk to their own health or safety, or that of others. The qualifications outlined herein represent the minimum standards of knowledge, skills, and abilities necessary for this position.

We are an Equal Opportunity Employer and are committed to fostering a diverse and inclusive workplace. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, age, or veteran status.

#### **Salary and Benefits**

Salary is commensurate with local market rates, and AFS offers competitive benefits comparable to those provided by other local companies.