



**EMPLOYEE POSITION DESCRIPTION**

<b>Job Title: Manager - Electrical Engineering</b>	<b>Department: Research &amp; Development</b>
<input checked="" type="checkbox"/> <b>Exempt</b>	<input type="checkbox"/> <b>Nonexempt</b>

**Position Description:**

The Electrical Engineering Manager will support all aspects of the design, development, documentation and testing novel electronic circuits as part of new disposable and capital medical devices. The EE manager will lead the electrical engineering team as a player/coach and act as core team member on complex development programs. Areas of responsibilities will include electrical system design, circuit design, writing test requirements and test procedures, PC-based simulation and data acquisition. Candidates must be able to write detailed electrical specifications, test procedures/reports and generate/review design documentation in compliance with design control procedures used within the medical device industry.

**Principal Responsibilities:**

The Electrical Engineering Manager is a key position in the R&D organization. Major responsibilities include:

- Development of systems and printed circuit boards for disposable and capital medical products.
- Work with cross functional groups to write requirements, specify system architecture, and develop test protocols.
- Design of microprocessor, micro-controller, DSP, and FPGA products for medical device applications.
- Provide expertise in the area of high precision analog and digital electronic circuits to include circuit design, simulation, prototype development and final design and testing.
- Strong background with EMI/ EMC testing, design verification and validation.
- Design medical device products for EMC, ESD, and electrical safety per IEC 60601-1.
- Utilize concepts and process for Design for manufacturability (DFM) and Design for reliability (DFR).
- Design of interfaces including USB, I2C, SPI, RS-232, Ethernet, LVDS, and TMDS.
- Works with MOSFET, BJT, PWM circuit designs.
- Provide guidance and understanding to navigate complex product certifications and industry regulations to include CE, UL, IEC, ISO-13485 and ISO-14971.
- Performs system-level, board-level or component-level analysis.
- Understand and utilize failure modes and effects analysis (FMEA), power budget, thermal budget, and design margins.
- Adheres to defined development procedures.
- Demonstrates good design practices.
- Evaluates performance of products based on industry practices and studies.
- Responsible for evaluation of product performance and system verification.
- Design and development of test systems required for verification.
- Develop and execute test protocols for system verification and document results and conclusions.
- Implements system verification in accordance with defined development procedures.
- Manage one or more electrical engineers.
- Act as electrical engineering core team member for cross-functional R&D programs.
- Functions well in a team environment.

The above statements are intended to describe the general nature and level of work being performed. They are not intended to be construed as an exhaustive list of all job responsibilities and duties.

**Qualifications, Education & Experience:**

- BS in Electrical, Electromechanical, Computer Engineering or related field.
- A minimum of 7 years of relevant experience, or an advanced degree with a minimum of 5 years of experience.
- Product development experience in medical device industry.

**Must Have:**

- Outstanding integrity, character, and trustworthiness; demonstrated evidence of leadership, creativity, adaptability, determination, perseverance and excellent communication.
- Experience documenting medical device development according to Quality System Regulations.
- Ability to work in a team environment.
- Circuit design and analysis skills.
- Schematic capture and PCB layout.
- Good written and verbal communication skills.
- Hands-on development of manufacturing and design processes.

**Nice to Have:**

- Schematic capture and PCB layout using OrCAD.
- Experience with MATLAB or other scripting language a plus.
- Excellent written and verbal communication skills.
- Electromechanical design experience.
- FPGA design experience.
- High-level software language experience.
- 3 years of experience in people leadership.

**Working Conditions:**

- Light work, exerting up to 20 lbs. of force and lifting to 50 lbs.
- Significant work pace & pressure due to deadlines of a start-up organization.
- Domestic and/or international travel may be required (up to 20%).
- Office and lab environment where the engineer would stand or sit for most of the day at a desk or lab bench.
- Operate a computer, telephone and other office equipment.

**Competitive salary and benefits package.**

**To Apply:** Submit your resume to [info@francismedical.com](mailto:info@francismedical.com)

**Company Overview:**

Francis Medical, Inc. is a dynamic, clinical-stage medical device company committed to developing urological cancer treatments that are tough on cancer, yet gentle on patients. Our work is fueled by a compassionate belief that cancer can be stopped with minimally invasive treatments. Founded in 2018, Francis Medical is a spinoff of NxThera, Inc. which was acquired by Boston Scientific in 2018 for \$406 million.

The company is named after Francis Hoey, the father of inventor and Francis Medical founder, Michael Hoey. In 1991, after undergoing prostate cancer treatments with debilitating effects on his daily living, Francis died from prostate cancer. Today, the work of Francis Medical stands as a tribute to and a lasting legacy of Francis Hoey.

Francis Medical has received IDE approval from the FDA and is currently executing clinical trials in the development of its disruptive solution to treat prostate cancer using sterile water vapor. Prostate cancer is the second most common cancer in American men with 1 in 9 diagnosed with the disease during their lifetime. Currently available prostate cancer treatments often result in life-altering side effects such as urinary incontinence and erectile dysfunction. Water vapor technology applies the thermal energy stored in sterile water vapor to convectively deliver targeted treatments to the cancerous tissue in a simple transurethral procedure. The intended result includes not only the ablation of cancer, but also minimal side effects.

Headquartered in Maple Grove, MN, Francis Medical has closed an initial \$21-million round of Series A funding led by previous NxThera investors. The company currently employs ~25 people. The work environment is casual, high-energy and collaborative, with the shared vision of making a difference in the lives of millions of men. More information can be found at [www.francismedical.com](http://www.francismedical.com).