

Sr Human Factors Scientist

Requisition 82147

Category Scientist

Business Cardiac Rhythm Disease Mgmt

Division Comm Syst Eng a Instruments

Location USA-MN-Mounds View

Relocation Relocation eligibility to be determined

Job Type Full Time - Regular

Exempt/Non-Exempt Exempt

Shift First

Travel Percentage 10 - 20%

Experience Required 10+ years

Education Required Masters Degree

Position Description

In this position, you will apply your knowledge of human performance and human factors techniques to the design and development of products offered by Medtronic Cardiac Rhythm Disease Management (CRDM). You will need a solid understanding of the theories, principles, and data associated with human performance capabilities and limitations (perceptual, cognitive, motor, bio-mechanical, and anthropometric) and the ability to apply this knowledge to the design, definition, evaluation, launch, and use of products across the range of CRDM products. Specific activities include:

- Provide Human Factors support across the product lifecycle including customer and user needs identification, development of user and workplace profiles and usage scenarios, task analysis, requirements specification, generation of hardware and software design concepts (creation of physical models and prototypes, graphical user interfaces, and product graphics), user interface design, usability testing, user error analysis, and post-launch outcomes analysis.
- Human Factors Engineering activities are performed within the constraints of a complex regulated environment; and in partnership with engineering (Software, Firmware, Hardware, Mechanical, and Systems), research, technology, marketing, clinical, regulatory, and marketing groups.
- Additional tasks include standards development, in-house training and popularizing of HF role. (But little selling, HF is already widely accepted as a key technology at Medtronic.)

CRDM seeks candidates who will meet our customers' expectations by striving without reserve for the greatest possible reliability and quality in our products, processes, and systems by being accountable, having a voice, and taking action.

Position Responsibilities

- Provide Human Factors support across the product lifecycle including customer and user needs identification, development of user and workplace profiles and usage scenarios, task analysis, requirements specification, generation of hardware and software design concepts (creation of physical models and prototypes, graphical user interfaces, and product graphics), user interface design, usability testing, user error analysis, and post-launch outcomes analysis. Responsible for human factors activities across Medtronic's product range including identifying, planning, monitoring, and executing tasks for entire project.
- Translate requirements into interaction/interface design solution concepts.
- Work closely with marketing, engineering, manufacturing, and regulatory to produce customer focused designs that not only meet user needs but also factor in business priorities and platform, architecture, and manufacturing constraints.
- Develop (physical and interaction) design solutions to complex, system-wide usability problems that require ingenuity and creativity.
- Prepare sketches and 2-D and/or 3-D illustrations for presentation of design concepts. Direct the development of physical mock-ups and interactive prototypes of design concepts.
- Plan and conduct end user evaluations of product concepts, analyze data, document evaluation methods and results; and present design recommendations to the product team.
- Use appropriate Human Factors techniques to work with end users to determine end user behavior, preferences, and usage models and integrate these into design concepts.
- Prepare clear and effective oral and written reports of current status, progress and status of project, as required by project or department management.
- Represent the Human Factors group through various capacities including: task planning and execution, leadership, expert guidance, and education.
- Interact professionally at all levels throughout the company and with consultants and customers. Comply with applicable Corporate and departmental policies.
- Provide oversight and collaborate with consulting firms to execute human factors activities on projects.
- Maintain technical knowledge current with advancing technology related to CRDM products and associated accessories. Complete required training and certifications.
- Engage in continuing education programs in order to keep current and broaden knowledge in selected discipline.

Basic Qualifications

- MS in Human Factors, Usability Engineering, Cognitive/Experimental Psychology, Kinesiology, Industrial Design or Master's degree in Biomedical Engineering with extensive human factors coursework.
 - 10+ year history of working on human factors design and evaluation of medical, business or consumer products.
 - A proven track record of applying various human factors/usability engineering principles and tools in the design, development, and evaluation of hardware and software products brought to market.
 - Integrate creative skills with innovative problem solving techniques to develop design concepts.
 - Experience working with and leading multidisciplinary teams that may include other HF experts.
 - Experience developing comprehensive plans and solutions to complex issues.
- Experience in cardiac function and implantable medical devices. Knowledge of human factors regulatory requirements for medical devices, software, and equipment. Have experience teaching human factors and ability engineering concepts to a diverse audience.

Desired/Preferred Qualifications

PhD in one of the above disciplines

Physical Job Requirements

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions. While performing the duties of this job, the employee is regularly required to stand, sit, walk, talk, hear and reach with hands and arms. The employee is required to use hands to handle, or feel objects, tools, or components. Specific vision abilities required by this job include normal vision.

To apply, go to

http://careers.peopleclick.com/careerscp/client_medtronic/EXTERNAL/en-us/gateway.do?functionName=viewFromLink&jobPostId=155345&localeCode=en-us