

Date: Aug 2017

Title: Engineer 1

Department: Biomedical Engineering

School: Engineering

Location: Bingham 308

Supervisor: Ron Triolo

POSITION OBJECTIVE

Performs engineering objectives as a member of multidisciplinary research and development teams designing and investigating new medical devices and restorative technologies, and provides high level computing infrastructure support. Responsible for microprocessor, mobile device, or computer based software system design, testing and operation on specific research and development projects for new assistive technologies for individuals with neuro-musculo-skeletal disabilities, limb loss or cognitive dysfunction.

ESSENTIAL FUNCTIONS

1. Work closely with project team members as well as other members of the technical and operations team including but not limited to the Quality System and Regulatory Specialists, and other biomedical, electronic or mechanical engineers. (10%)
2. Identify the work to be done to fulfill project requirements and objectives, plans and carries out the procedural and technical steps required, seek assistance as needed, independently coordinate work efforts with outside parties, and characteristically submit only completed work. (10%)
3. Develop embedded control and operating systems for new and emerging assistive technologies and medical devices, and creates both low and high level user and clinician interfaces. (20%)
4. Set system processing specifications, designs and verifies software operation of new computer- microprocessor- or mobile computing platform-based assistive technologies. (20%)
5. Construct embedded applications and integrates information from networks of distributed sensors in new medical devices. (20%)
6. Design, maintain and interrogate databases for research-related operational information. (5%)
7. Fully document, test and validate design and system performance according to standard design controls and quality system practices, including incident reporting, error/bug tracking and repair, and version/release control. (10%)
8. Coordinate and supervise the activities of part-time students hired to execute low level administrative software support like data entry or inventory control, as well as graduate students developing project-specific hardware or software. (5%)

NONESSENTIAL FUNCTIONS

Perform other duties as assigned

CONTACTS

Department: Meet regularly with supervisor regarding assignments. Interact with other engineers in department

University:

External: Contact with research subjects at the Louis Stokes Cleveland VAMC. Contact with surgeons, therapist and other clinical personnel.

Students: Interaction with students working on projects

SUPERVISORY RESPONSIBILITY

None

QUALIFICATIONS

Experience: 1 to 3 years of experience, with at least 1 year of research and development experience.

Education: Bachelor's degree in Biomedical or Electrical Engineering, Computer Science, Computer Engineering or equivalent; Master's degree preferred.

REQUIRED SKILLS

1. Knowledge of digital system and computer design, computer programming, signal processing and sensor technology, data acquisition and electronic instrumentation are required.
 2. Experience in developing hardware interface and programming embedded systems such as microcontrollers or microprocessors
 3. Knowledge and ability to apply the principles, theories, concepts and practices of the engineering profession and ability to keep abreast of changes in technology and utilize the most current information to engineer solutions to technical problems
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