

JOB DESCRIPTION

This job description is a summary of the typical job duties and requirements that are essential to the evaluation of the job and is not intended to be complete in detail. On occasion, individuals classified on this job may be required to perform functions of a higher or lower skill level not included in this job description.

Job Title: Clinical Biomedical Engineer- Laboratory		Date: January 27, 2010	
Cost Center #: 257010	Cost Center Name: Medical Engineering	Reports to (first level): Director, Medical Engineering	2nd level of Supervision: Hospital Director

1. JOB SUMMARY & SCOPE:

Manage clinical/ biomedical engineering functions as they relate to biomedical/ laboratory/ optical equipment/technology administration, maintenance and clinical/ research applications.
 Duties to cover FAS/DTS/AUBMC and to include: handling laboratory and research equipment, liaising with outside servicing companies, new equipment installation, risk assessment, incident investigation.
 Supporting the mission and vision of the American University of Beirut Medical center (AUBMC), Diana Tamari Sabbagh (DTS), FAS, and that of the department.

2. JOB COMPETENCY PROFILE:

- **Technical Expertise:** Specialized Knowledge in technical area
 - Provide in-depth knowledge and skill in a technical area
 - Provide technical support for clinical equipment throughout healthcare system as assigned
 - Is sought out as an expert, to provide advice in the specified technical area, and demonstrates confidence in that.
 - Keep informed and updated about cutting-edge technology or information in specific technical area
- **Applied Technology:** Maintain and optimize equipment and systems
 - Provide quality of services: maintenance, PM/electrical and safety inspections according to proper procedures/ standards
 - Test and maintain clinical equipment
 - Ensure that the equipment data in the equipments database as well as the service documentation and service notes/bulletins/software are proper
 - Develop preventive maintenance schedules and guidelines
 - Achieve satisfactory safety/ proper biomedical/ repair shop operating standards
- **Quality management:** Monitor quality indicators and recommend improvements
 - Actively contribute in the department PI activity and submit requested reports on time
- **Client Focus:** Anticipate & adapt to client needs / Address underlying client needs
 - Contact clients to follow up on services, solutions or products to ensure that their needs have been correctly and effectively met
 - Keep clients up-to-date with information and decisions that affect them.
 - Monitor services provided to clients and make timely adjustments as required
 - Respond to emergency calls
 - Deal with technical queries from clients and give advice on new equipment
- **Information and Records Management:** Manage and analyze information
 - Analyze data critically and submit sound interpretation
 - Develop reports relevant to the subject in question

- **Initiative** : Recognize and address current and imminent issues
 - Recognize and act on present issues proactively
 - Act promptly in a crisis situation
 - Take necessary actions to correct any identified safety/quality deficiencies
- **Team Skills:** Teamwork/Collaboration; Work collaboratively with teammates
 - Advise/help in technology planning/acquisitions
 - Advise/help in cost effective technology management
- **Communication Skills:** Communicate effectively up, down, and laterally
 - Ability to respond to enquiries regarding service provided when dealing with clinical colleagues
 - Ability to communicate the outcome of problem solving and research and development activities to management
 - Ability to communicate and explain complex or sensitive issues
 - Liaise with technicians and manufacturers to ensure the proper maintenance of medical equipment
- **Problem Solving:** Use creative thinking in solving problems involving varied levels of complexity, ambiguity and risk
 - Use intuition, past experience and a proven, consistent process to approach making decisions
 - Determine possible solutions and actively work to resolve the problem
 - Perceive impact and implications of alternative solutions; weighs relevance and accuracy of information
 - Take appropriate actions on Recalls and Alerts
- **Resource management:** Use resources effectively
 - Protect and use resources and assets in a conscientious and effective manner
 - Follow departmental and organizational expectations related to effective resource use
 - Ensure availability of needed supplies at all times
 - Recommend ordering needed spare parts and help in maintaining inventory as specified in Biomedical Lab policies and procedures
- **Safety and Health Management:** Demonstrate up-to-date knowledge of best practices and ensure applicability and implementation
 - Ability to assess, develop and evaluate implementation of health and safety policies and procedures
 - Ability to communicate to supervisors safety matters and train them in safety and health requirements
 - Ability to anticipate safety issues and take proactive steps to maximize safe operations and measure the effectiveness of action
 - Ensure that work processes are free from safety and health hazards
 - Demonstrate ability to manage risk in area supervised, identify areas for change and reports them to people in charge
- **Developing others:** Share expertise with others
 - Occasionally train technical service personnel on the use of new or modified equipment according to internally developed requirements
- **Planning and Organizing:** Prioritize own work
 - Plan and organize work effectively. Utilize time well to perform quality work effectively and efficiently
 - Ensure that the staff are utilizing proper safety equipment when performing duties
- **Professional Development:** Align personal development with objectives of organization
 - Use organizational change as an opportunity to develop new skills and knowledge
 - Transfer knowledge by actively participating in conferences, seminars, and committees

- **Accountability:** Independently complete routine tasks
 - Work independently with limited direction in carrying out routine assigned tasks and projects
 - Present relevant and timely feedback on project or task status, issues and potential problems
- **Organization Awareness:** Understand Formal Structure of AUBMC and apply internal policies and procedures
 - Understand new organization and department development and how it might impact known job and adjust work routines accordingly
 - Understand the services provided by other divisions
- **Computer Skills:** Word Processing & Spreadsheet
 - Document all actions and results according to department policy using computerized program
- **English Comprehension:** Business writing

3. Knowledge:

- Knowledge of International codes of practice especially those related to various US regulatory agencies including JCI, FDA, is an advantage, knowledge of Physiology, mechanical, optical, hydraulic, pneumatic & radiation principles that apply to laboratory and research equipment/ systems.
- Knowledge of Digital circuitry
- Knowledge of Analog circuitry
- Technical knowledge of a wide variety of laboratory and research equipment and ability to calibrate equipment

4. PRINCIPAL WORKING RELATIONSHIPS:

- Routine contacts with users including: supervisors
- Occasional contact with Department Heads, company service representatives, purchasing department and supply/receiving

5. CONSEQUENCES OF ACTIONS OR DECISIONS:

Global

- Disruption of teaching and research activities at AUB
- Procedures/ research may be rescheduled pending the repairs on equipment
- Accreditation bodies' inspection may result in negative ratings
- Loss of income due to equipment failure
- Loss of income and leading edge due to wrong technology planning/ acquisition decisions

Pertinent only to AUBMC (when applicable)

- Hospital Admissions may be limited on floors where equipment has not been repaired quickly
- Decrease in community satisfaction level with patient care at HOSPITAL due to increase in treatment time or rescheduling of appointments.
- Reduced quality and reliability of equipment may result in misdiagnosis/ improper treatment of patients &/or bad research outcome
- Improperly maintained equipment can be hazardous to users & patients (if applicable)

6. SUPERVISORY RESPONSIBILITY:

- None

7. PHYSICAL EFFORT:

- Physical effort involving standing/ walking moving and computer work approximately 10% of working time.
- Occasional heavy lifting up to 20 kg. Repeated pushing and pulling of tool carts, frequent sitting at work station.
- Occasionally tedious work assignments involving very small parts and complex wiring which requires normal vision and color vision

8. WORKING CONDITIONS:

- Clean well lit office environment 10%
- Normal shop environment, with minor exposure to cuts, dirt, noise, oil, etc. 90%
- Well lit shop environment, controlled climate with slightly confined workspaces. Out of shop conditions vary widely, confined spaces, wet locations, some with communicable diseases. Exposure to certain biological, chemical, mechanical and electrical hazards
- Will need to walk to and work in laboratories within FAS/ DTS/ AUBMC
- Work during normal hours
- May be on call during weekends and holidays

9. MINIMUM JOB REQUIREMENTS:**Education:**

Minimum Education: Bachelor's in Clinical or Biomedical Engineering or Medical Electronics or Electronic/ Electrical/ Communication Engineering

Preferred Education: Master's in Engineering or related field

Field of Expertise: Laboratory & Research equipment maintenance + electronics and computers.

Experience:

Minimum Experience: 1-2 years of experience in the installation and repair of electronic medical laboratory & research technology within a hospital/university setup

Languages:

Minimum Languages: Arabic and English (EEE score \geq 500)

Preferred Languages: German and French

Compiled By:

HR Generalist

Date: November 23, 2009

Approved by (Dep Hd, Chairman):

Date:

Hospital Director's Approval:

Date:

HR Director's Authorization:

Date:

Supersedes Description:

Title:

Grade:

Date: October 27, 2009

Job Code:

Job Grade:

Date: