

Biomedical Engineering Student Placement Healthcare Technology Management (HTM)

Canberra Health Services

Our Vision: creating exceptional health care together

Our Role: to be a health service that is trusted by our community

Canberra Health Services (CHS) is focussed on the delivery of high quality, effective, person centred care. It provides acute, sub-acute, primary and community-based health services, to the Australian Capital Territory (ACT)—a catchment of approximately 400, 000 people. It also services the surrounding Southern New South Wales region which includes the Bega Valley, Bombala, Cooma-Monaro, Eurobodalla, Goulburn, Mulwaree, Palerang, Queanbeyan, Snowy River, Upper Lachlan Shire and the Yass Valley.

CHS administers a range publicly funded health facilities, programs and services including but not limited to:

- **The Canberra Hospital:** a modern 600-bed tertiary hospital providing trauma services and most major medical and surgical sub-specialty services.
- **University of Canberra Hospital Specialist Centre for Rehabilitation, Recovery and Research:** a dedicated and purpose-built rehabilitation facility, with 140 inpatient beds, 75-day places and additional outpatient services.
- **Four Walk-in Centres:** which provide free treatment for minor illness and injury.
- **Six community health centres:** providing a range of general and specialist health services to people of all ages.
- A range of **community-based health services** including early childhood services, youth and women's health, dental health, mental health and alcohol and drug services.

Overview of the work area and placement:

The Healthcare Technology Management Department (HTM) comprises of an Operational Support Team and a Clinical Asset Management Team, staffed by professional biomedical engineers and technicians. The Department is led by the Director and is responsible for managing medical devices, systems and clinical networks utilised in ACT Health hospitals and community health centres. The Department is located at The Canberra Hospital in Garran.

HTM is responsible for the healthcare technology management of ACT Health's inventory of medical equipment, medical electrical systems and medical IT-networks (much of which is located on Canberra Hospital campus):

- provides Biomedical Engineering support and advice to all clinical areas
- manages, monitors and supervises services contracts for medical equipment and external contractors
- ensures technical compliance of all medical equipment, systems and technology to appropriate standards and regulations

- manages and maintains a register of all medical equipment and medical electrical systems owned by ACT Health
- liaises with other government departments, universities, and BME departments on BME matters
- designs, modifies and manufactures medical devices and technical aids
- participates in clinical research for the improvement of health services

The engineering student placement is supervised by the Director of HTM, and is responsible for supporting projects undertaken by the department for efficient implementation and management for a broad range of medical equipment and systems.

Description of work and tasks

1. Under direction and in consultation with the Director HTM, Operations Manager and Clinical Asset Manager, undertake and assist with tasks and project related activities guided by the Department business plan and core principles of quality Biomedical Engineering service delivery.
 - Conduct and assist with audit of healthcare technology and data analysis of CHS inventory of healthcare technology with ability to design, create and present available data in a easy to understand graphical formats
- 2.
3. Under supervision and direction from Clinical Asset Manager assist with installation and commissioning of biomedical equipment and systems including clinical network in the existing and new clinical facilities.
 - Participate in project review involving multiple stake holders, meeting attendance and minor technical work under supervision
- 4.
5. Assist in preparing the documentations of stakeholder consultations, writing technical specification and development of presentations and reports.
6. Undertaking other duties as directed, within the approved scope of clinical practice for engineering student placement

Personal Attributes:

To be successful in this position, it is expected that the successful candidate will have the following attributes:

- Good communication and interpersonal skills
- Strong organisational skills with a high degree of drive-
- Adaptability and flexibility to accommodate change and provide responsive services to meet clients' needs

Qualifications and experience:

Mandatory:

- Undertaking or recently completed a Bachelor of Engineering course with Biomedical engineering as major.

Desirable:

- Fluency in using MS Office, Access, Projects, Visio packages
- Fluency in C++, JAVA, VB, XML & SQL coding

Please note prior to commencement successful candidates will be required to:

- Undergo a pre-employment Police check.

- Obtain a Compliance Certificate from OMU (Occupational Medicine Unit) relating to assessment, screening & vaccination processes against specified infectious diseases.

Selection Criteria

These are the key criteria for how you will be assessed in conjunction with your resume and experience.

Your statement of claims against the selection criteria should summarise how your skills and experiences would enable you to fulfil the responsibilities of the position. It is therefore in the interests of candidates to present their application in a way that demonstrates significant outcomes associated with each of the criteria, as well as the capabilities and behaviours that underpin them. The interview process will also apply.

(Please note that it is not necessary to address the capabilities and behaviours individually).

1. Good knowledge and understanding of human anatomy, physiology and electrical activities on human body
2. Basic understanding of physiological signals available and processed in clinical diagnosis
3. Basic understanding of Australian and international standards relevant to healthcare technology management.
4. Good understanding of audit and information gathering with ability to analyse data.
5. Good knowledge and understanding of engineering principles and systems engineering approach to complex engineering and clinical problems.
6. Demonstrated ability to work in a multi-disciplinary team, willingness to participate in team decision making and planning.
7. Good written communication and interpersonal skills and demonstrated ability to establish and maintain working relationships with a range of internal and external clients, stakeholders and service providers.
8. Demonstrates a commitment to work, health and safety (WH&S) and the positive patient experience and displays behaviour consistent with Canberra Health Service's values of Reliable, Progressive, Respectful and Kind.

Job Demands Checklist

Physical Demands

Frequency

Sitting - remaining in a seated position to perform tasks	Frequent
Standing - remaining standing without moving about to perform tasks	Occasional
Walking - Floor type: even / uneven / slippery, indoors / outdoors, slopes	N/A
Running - Floor type: even / uneven / slippery, indoors / outdoors, slopes	N/A
Bend/Lean Forward from Waist - Forward bending from the waist to perform tasks	Occasional
Trunk Twisting - Turning from the waist while sitting or standing to perform tasks	Occasional
Kneeling - remaining in a kneeling posture to perform tasks	Occasional
Squatting / Crouching - Adopting a squatting or crouching posture to perform tasks	Occasional
Leg / Foot Movement - Use of leg and / or foot to operate machinery	N/A
Climbing (stairs/ladders) - Ascend / descend stairs, ladders, steps	Occasional
Lifting / Carrying - Light lifting & carrying: 0 - 9 kg	Occasional
Lifting / Carrying - Moderate lifting & carrying: 10 - 15 kg	Occasional
Lifting / Carrying - Heavy lifting & carrying: 16kg & above	N/A
Reaching - Arms fully extended forward or raised above shoulder	N/A
Pushing / Pulling / Restraining - Using force to hold / restrain or move objects toward or away from the body	N/A
Head / Neck Postures - Holding head in a position other than neutral (facing forward)	N/A
Hand & Arm Movements - Repetitive movements of hands and arms	Occasional
Grasping / Fine Manipulation - Gripping, holding, clasping with fingers or hands	Occasional
Driving - Operating any motor powered vehicle	N/A

Sensory Demands

Frequency

Sight - Use of sight is an integral part of work performance e.g. Viewing of X-Rays, computer screens	Frequent
Smell - Use of smell is an integral part of work performance e.g. Working with chemicals	Occasional
Touch - Use of touch is an integral part of work performance	Occasional

Psychosocial Demands

Frequency

Distressed People - e.g. Emergency or grief situations	N/A
Aggressive & Uncooperative People - e.g. drug / alcohol, dementia, mental illness	N/A
Unpredictable People - e.g. Dementia, mental illness, head injuries	N/A
Restraining - involvement in physical containment of clients/consumers	N/A
Exposure to Distressing Situations - e.g. Child abuse, viewing dead / mutilated bodies; verbal abuse; domestic violence; suicide	N/A

Environment Demands

Frequency

Gases - Working with explosive or flammable gases requiring precautionary measures	Occasional
Liquids - Working with corrosive, toxic or poisonous liquids or chemicals requiring PPE	Occasional
Hazardous substances - e.g. Dry chemicals, glues	Occasional
Noise - Environmental / background noise necessitates people raise their voice to be heard	Occasional
Sunlight - Risk of sunburn exists from spending more than 10 minutes per day in sunlight	N/A
Confined Spaces - areas where only one egress (escape route) exists	N/A
Slippery or Uneven Surfaces - Greasy or wet floor surfaces, ramps, uneven ground	N/A
Inadequate Housekeeping - Obstructions to walkways and work areas cause trips and falls	N/A
Biological Hazards - e.g. exposure to body fluids, bacteria, infectious diseases	Occasional