POSITION DESCRIPTION

SCHN - Biomedical Engineer – Simulation Service

Organisation	NSW Health
Local Health District / Agency	The Sydney Children's Hospitals Network
Position Classification	Biomedical Engineer Gde 1
State Award	Public Hospital Professional Engineers (Biomedical Engineers) (State) Award
Category	Engineering | Biomedical
Website	www.schn.health.nsw.gov.au

PRIMARY PURPOSE

Biomedical Engineer is responsible for:

- Maintain an inventory of the Network Simulation Service equipment
- Preventative maintenance and sustainability of biomedical and simulation equipment owned or governed by the Network Simulation Service across the Network
- Manage and schedule servicing of equipment
- Monitor risk and escalate risk to the Network Simulation Manager
- Equipment design, sourcing and procurement for the program
- Innovative planning and advice regarding simulation equipment

The Biomedical Engineer should:

- Have initiative and work collaboratively with the Network Simulation Service staff and key stakeholders
- Be innovative with simulation equipment design to meet service and program needs
- Keep up to date with international experience and biomedical simulation equipment research
- Be accountable for safe function of simulation equipment

This position incorporates knowledge and experience of biomedical engineering with the ability to apply it to simulation based education technologies in creating safe simulation environments and effective learning experiences.

The Biomedical Engineer will:

- Report to the Network Simulation Manager.
- Provide service to the whole of the Network and work based on site at both hospital campuses of the Network.

RESPIRATOR USE

NSW Health workers may be required to use a respirator as part of their appointment with NSW Health. Where a respirator is required for use, workers will be instructed in their safe use, including donning, doffing and fit checking. Staff may be required to complete fit testing to selected respirator/s to assess their facial fit/seal.

At all times when a health worker is required to use a respirator, the health worker must not have any facial hair present. Processes are in place to support workers that need to keep facial hair due to religious observance requirements and/ or health conditions.

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ESSENTIAL CRITERIA

Essential Criteria: IT experience and mechanical knowledge.
Qualifications/ Licenses/ Registrations: A degree in Biomedical Engineering, Mechanical Engineering or equivalent from a recognised University or College of Advanced Education
Drivers Licence: Yes WWCC: Yes
Work Health and Safety: You must take all reasonable care for yourself and others and comply with any reasonable instruction, policies and procedures relating to work health safety and wellbeing

KEY ACCOUNTABILITIES

Leadership

- Collaborate effectively with diverse staff members across professions and non-clinical roles.
- Represent the Network Simulation Service professionally and informatively when required.
- Contribute to and support simulation and associated education research.

Vision

- Support the development of the Network Simulation Service to create a culture of continuous improvement and person-centeredness.
- Lead the operationalisation of the simulation biomedical engineering portfolio within the Network Simulation Service and act as the primary contact for simulation biomedical engineering support across the Network.

Culture

- Foster an environment within SCHN that values and encourages innovation, creativity, research, evaluation, and best practices.
- Promote a culture that respects individual differences, ensuring individual and group safety and security.

Operational Performance

- Ensure the safety and functionality of all simulation and biomedical equipment across the Network that is owned or governed by the Network Simulation Service.
- Maintain and repair simulation and biomedical equipment that is owned or governed by the Network Simulation Service.
- Collaborate with the Network Simulation Manager to develop, maintain, and evaluate a maintenance plan for simulation and biomedical equipment that is owned or governed by the Network Simulation Service.
- Work under the direction of the Network Simulation Manager in collaboration with the Heads of Biomedical Engineering to deliver a quality service.
- Report on the progress of key performance indicators related to relevant SCHN strategic and operational plans.
- Develop necessary written documentation and communication for the service.

Education and Learning

- Maintain proficiency in technology modalities used in simulation-based education.
- Understand the nature and needs of simulation-based education, including a combined understanding of technical systems and human physiology.

Quality and Safety

- Develop new techniques and equipment to meet simulation-based education, research & translational simulation needs.
- Participate in research projects within or representing the SCHN with external research partners as appropriate.
- Collaborate with key stakeholders in designing and developing simulation technologies.
- Collaborate with the Network Simulation Manager to ensure programs meet facility accreditation requirements.
- Develop, review, and evaluate evidence-based guidelines and quality improvement projects related to biomedical engineering within simulation.

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KEY CHALLENGES

- Busy workload
- Managing competing service priorities across the Network
- Problem solving in a multi-disciplinary environment
- Developing skills and knowledge under supervision and self-guided study

KEY RELATIONSHIPS

Who	Why
Network Simulation Manager	**Reporting on performance, issues and workload**
Simulation Team	**Support simulation activities & equipment**
Suppliers and Industry Partners	**Maintain appropriate relationship with suppliers of relevant medical devices to the hospital and industry partners**

SELECTION CRITERIA

1. A degree in Biomedical Engineering, Mechanical Engineering or equivalent from a recognised University or College of Advanced Education.
2. Excellent verbal and written communication skills
3. Excellent computer skills
4. Knowledge of basic Anatomy and Physiology, or willingness to undertake appropriate training in Life Sciences
5. Experience with medical equipment and/or a clinical environment
6. Knowledge of SolidWorks
7. Knowledge of ISO9001 and A.C.H.S.
8. Current unrestricted NSW driver's license

OTHER REQUIREMENTS

- Understand and practice person centred care. • Work in partnership with consumers on improving and evaluating the delivery of services.
- Actively participate in quality improvement activities.
- Ensure timely and accurate reporting of near or actual, incidents or patient safety concerns
- Be familiar with SCHN Child Protection Policy and Procedures and notify any allegations of suspected child abuse and neglect in line with policies.
- Adhere to all current SCHN and NSW Health policies and procedures, including the NSW Health Code of Conduct.

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CAPABILITIES FOR THE ROLE

The NSW Public Sector Capability Framework applies to all NSW public sector employees. The Capability Framework is available via the Public Service Commission website.

Capability Summary

Below is the full list of capabilities and the level required for this role. The capabilities in bold are the focus capabilities for this role. Refer to the next section for further information about the focus capabilities.

NSW Public Sector Capability Framework		
Capability Group	**Capability Name**	**Level**
Personal Attributes	Display Resilience and Courage	Foundational
	Act with Integrity	Foundational
	Manage Self	Highly Advanced
	Value Diversity and Inclusion	Intermediate
Relationships	Communicate Effectively	Advanced
	Commit to Customer Service	Advanced
	Work Collaboratively	Advanced
	Influence and Negotiate	Advanced
Results	Deliver Results	Highly Advanced
	Plan and Prioritise	Advanced
	Think and Solve Problems	Advanced
	Demonstrate Accountability	Advanced
Business Enablers	Finance	Intermediate
	Technology	Highly Advanced
	Procurement and Contract Management	Foundational
	Project Management	Foundational

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Job Demands for: SCHN - Biomedical Engineer – Critical Care Simulation Program

Physical Demands	
Respirator use - Wearing of a respirator, to ensure protection against exposure to respiratory pathogens/ hazardous materials Infrequent	**Sitting** - remaining in a seated position to perform tasks Frequent
Standing - remaining standing without moving about to perform tasks Frequent	**Walking** - floor type: even/uneven/slippery, indoors/outdoors, slopes Frequent
Running - floor type: even/uneven/slippery, indoors/outdoors, slopes Infrequent	**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 Occasional
Climbing (stairs/ladders) - ascend/descend stairs, ladders, steps Occasional	**Lifting/Carrying** - light lifting and carrying (0 to 9 kg) Occasional
Lifting/Carrying - moderate lifting and carrying (10 to 15 kg) Occasional	**Lifting/Carrying** - heavy lifting and carrying (16kg and above) Infrequent
Reaching - arms fully extended forward or raised above shoulder	**Pushing/Pulling/Restraining** - using force to hold/restrain or move objects toward or away from the body

Occasional	Frequent
Head/Neck Postures - holding head in a position other than neutral (facing forward) Infrequent	**Hand and Arm Movements** - repetitive movements of hands and arms Constant
Grasping/Fine Manipulation - gripping, holding, clasping with fingers or hands Occasional	**Work at Heights** - using ladders, footstools, scaffolding, or other objects to perform work Infrequent
Driving - Operating any motor powered vehicle Occasional	

Sensory Demands	
Sight - use of sight is an integral part of work performance (e.g. viewing of X-Rays, computer screens) Constant	**Hearing** - use of hearing is an integral part of work performance (e.g. Telephone enquiries) Frequent
Smell - use of smell is an integral part of work performance (e.g. working with chemicals) Frequent	**Taste** - use of taste is an integral part of work performance (e.g. food preparation) Not Applicable
Touch - use of touch is an integral part of work performance Occasional	

Psychosocial Demands	
Distressed People - e.g. emergency or grief situations Infrequent	**Aggressive and Uncooperative People** - e.g. drug/alcohol, dementia, mental illness Infrequent
Unpredictable People - e.g. dementia, mental illness, head injuries	**Restraining** - involvement in physical containment of patients/clients

Infrequent	Not Applicable
Exposure to Distressing Situations - e.g. child abuse, viewing dead/mutilated bodies Not Applicable	

Environmental Demands	
Dust - exposure to atmospheric dust Occasional	**Gases** - working with explosive or flammable gases requiring precautionary measures Occasional
Fumes - exposure to noxious or toxic fumes Occasional	**Liquids** - working with corrosive, toxic or poisonous liquids or chemicals requiring PPE Frequent
Hazardous Substances - e.g. dry chemicals, glues Occasional	**Noise** - environmental/background noise necessitates people raise their voice to be heard Occasional
Inadequate Lighting - risk of trips, falls or eyestrain Infrequent	**Sunlight** - risk of sunburn exists from spending more than 10 minutes per day in sunlight Infrequent
Extreme Temperatures - environmental temperatures are less than 15°C or more than 35°C Infrequent	**Confined Spaces** - areas where only one egress (escape route) exists Occasional
Slippery or Uneven Surfaces - greasy or wet floor surfaces, ramps, uneven ground Occasional	**Inadequate Housekeeping - obstructions to walkways and work areas cause trips and falls** Occasional
Working At Heights - ladders/stepladders/scaffolding are required to perform tasks Infrequent	**Biological Hazards** - exposure to body fluids, bacteria, infectious diseases Frequent