

## JOB DESCRIPTION

<b>Job Title</b>	Product Design Engineer
<b>Hours</b>	37.5 hours per week (One year fixed term contract)
<b>Department</b>	MERU
<b>Location</b>	MERU
<b>Reports to</b>	MERU Operations Manager
<b>Staff Management</b>	None

### MAIN FUNCTION OF JOB

- MERU is a charity that designs innovative products to help disabled people to learn, access technology and be more independent. MERU is part of the QEF family of Charities.
- The MERU Product Design Engineer will lead two key strategic projects in the areas of Early Years Powered Mobility and Accessible Musical Instruments.

### MAIN DUTIES

- To develop a larger, outdoor version of Bugzi, our small powered wheelchair for very young children. This will involve:
  - Conducting user and market research
  - Researching and applying relevant British/ISO standards
  - Developing a range of feasible product ideas within set economic and technical constraints
  - Liaising with UCL researchers to integrate sensing and communication technologies
  - Working with professionals from different disciplines to ensure fit for purpose
  - Producing technical drawings that meet current British standards
  - Working with the MERU team to create pre-production prototypes for testing
  - Finding suppliers and manufacturing partners (where relevant) and supervising a first production run
- To develop a range of supports to make brass musical instruments more accessible, in association with a partner charity. This will involve:
  - Detailed user research
  - Developing a range of feasible product ideas within set economic and technical constraints
  - Iterative prototyping to perfect design solutions, including the use of rapid prototyping techniques
  - Producing technical drawings that meet current British standards
  - Coordinating manufacture and testing of selected designs

## **OTHER DUTIES**

This job description is not exhaustive. The post holder will be expected to conduct any other duties as reasonably required by the Operations Manager or the CEO.

## **LINE MANAGEMENT/SUPERVISORY DUTIES OF POST:**

- Supervision and assistance of students (including work experience) and volunteers in the MERU workshop.

## **HEALTH AND SAFETY DUTIES**

- Risk assessment of tasks and activities related to the role, including new processes created as a result of project work.
- Implementation of actions to ensure and improve safety within the workshop
- Working with the MERU team to maintain a safe working environment
- Undertaking specific regular inspections/tests to comply with safety requirements, as required by line manager.
- Reporting accidents and adverse incidents, and facilitating students and volunteers to do the same
- Assisting line manager and service manager to investigate accidents and adverse incidents.

## **TRAINING AND SUPERVISION**

- All staff will be expected to undertake mandatory training as required by QEF.
- Training will be given on unfamiliar items of machinery or processes.
- All staff will be expected to undertake continuing professional development as directed by the Operations Manager.
- The post holder will be required to register with the Health and Assistive Technology Society and to work towards accreditation.



from disabilities to possibilities



**QEF**

queen elizabeth's  
foundation for  
disabled people

**PERSON SPECIFICATION**

Job Title           MERU Product Design Engineer

<b>Qualifications and training</b>	<b>Essential/Desirable</b>	<b>Assessed by</b>
Bachelor of Science degree in Product Design or related technical discipline at 2:1 grade or higher	Essential	Application and interview
Or in the absence of this formal qualification;  5 years of experience in a technical design or related role	Essential	
<b>Knowledge and skills</b>		
Ability to utilise a range of primary research methodologies such as interview, survey and observation	Essential	Application and interview
Comprehensive CAD skills (solid modelling packages preferred)	Essential	
Ability to create and interpret technical drawings to current BS standards	Essential	
Detailed understanding of mechanical engineering concepts, such as load, stress and energy calculations.	Essential	
Working knowledge of standards and legislation relating to medical devices	Essential	
Excellent office IT skills	Essential	
Sound knowledge and understanding of materials properties	Essential	
Ability to work collaboratively and with multi-disciplinary teams	Essential	
Ability to create a range of viable concepts to address a brief and develop these against set criteria	Essential	
Knowledge of and ability to utilise rapid prototyping techniques such as 3D printing	Essential	
Excellent project management skills and ability to progress work independently	Essential	
Excellent communication skills (written and oral)	Essential	

Excellent numeracy skills	Essential	
Ability to follow instructions and work to deadlines.	Essential	
Knowledge and awareness of health and safety procedures.	Desirable	
Ability to recognise and work within personal limitations.	Essential	
A commitment to quality and safe working practices	Essential	
<b>Experience</b>		
Experience of designing Class 1 Medical Devices	Essential	Application and interview
Experience of leading design projects	Essential	
Experience of designing products to meet ISO/EN/BS standards	Desirable	
<b>Personal Qualities</b>		
<p>To conduct oneself at all times in accordance with QEF's Values and Behaviours:</p> <ul style="list-style-type: none"> <li>• Everyone Matters: Respectful, Supportive, Appreciative</li> <li>• Everyone Works Together: Collaborative, Actively Listening, Communicative</li> <li>• Everyone Make a Difference: Responsible, Innovative, Learning</li> </ul>	Essential	Application and interview