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## JOB DESCRIPTION

<b>Job Title:</b>	<b>Biomechanics Technician Demonstrator</b>
<b>School:</b>	<b>Cardiff School of Sport and Health Sciences</b>
<b>Location:</b>	<b>Cyncoed Campus</b>
<b>Grade:</b>	<b>6AB</b>
<b>Salary:</b>	<b>£38,205 - £42,978 per annum</b>
<b>Tenure:</b>	<b>Permanent</b>
<b>Hours:</b>	<b>14.8 hours per week (0.4 FTE)</b>

### Role Summary:

The post holder will support the delivery of sport and exercise science / biomechanics programme portfolio including technical expertise and general administrative duties with specific responsibility within the area of Biomechanics.

Academic staff have overall responsibility for students, but the duties and responsibilities detailed below may be undertaken by Technician Demonstrators, in the absence of a member of academic staff. During such times, Technician Demonstrators will be responsible for the health and safety of students in their jurisdiction.

### Principal Duties and Responsibilities:

The Biomechanics Technician Demonstrator will undertake the following duties, carried out in liaison with the Programme Director and biomechanics Lab Director or other identified members of academic staff as appropriate:

- 1) Supervise laboratory work and processes undertaken by staff, students and visitors as required within Biomechanics and other such areas as requested.
- 2) Demonstrate practical techniques and processes and the operation of equipment in teaching rooms, specialist facilities to staff, students and visitors for taught practical sessions, research activities and projects.

- 3) Ensure that equipment and materials are in place at the appropriate times and that rooms and specialist facilities are ready for teaching and are functioning effectively and safely.
- 4) Advise and support academic / research staff and students on the use and application of techniques, equipment and process associated with programmes of study and research and innovation activities.
- 5) Discuss student progress with academic staff. Provide feedback to academic staff on a student's ability to progress and their skill level.
- 6) Design, develop and modify specialist methods, processes and equipment required for course programmes and needs of the school.
- 7) Support the delivery of seminars aligned to practical work and which have been planned by academic staff
- 8) Advise on the purchase of new equipment and required maintenance of existing equipment. Purchase replacement or new equipment and consumable items. Undertake budgetary control, in close liaison with discipline staff and SROM.
- 9) Maintain the inventory database ensuring that new equipment is recorded and labelled accurately, and obsolete items written off appropriately. Prepare and implement maintenance schedules to meet statutory and university requirements.
- 10) Attend school Health and Safety Committee meeting and report on Health and Safety issues and action any recommendation as appropriate. Advise academic staff on any student matter that relates to their health, safety or welfare.
- 11) Develop and maintain comprehensive teaching area and laboratory H&S management systems and monitor compliance. The design and review of health and safety regimes and protocols.
- 12) Understand the requirements of each module for which laboratory demonstrations are delegated. Maintain knowledge of the requirements of academic modules to ensure that demonstrations can be designed to achieve the learning outcomes. Identify and review areas for which further briefing, or training is required.
- 13) General administrative tasks associated with the sport and exercise science programmes.
- 14) Work closely with Technician Demonstrators in other areas and assist them with their duties as necessary and when workload requires.
- 15) Provide expert technical support on the use of the:
  - a. automated motion analysis systems (Training in advanced techniques will be provided by the manufacturers).

- b. Video based analysis systems (qualitative and quantitative techniques)
  - c. Force measuring equipment including force plates and instrumented sports equipment.
  - d. Other biomechanical hardware (e.g., inertial measurement units, electromyography) and software, as appropriate.
- 16) Support project/thesis/income generation work by assisting with data collections. Organise and prioritise the work of others including assisting students in organising their research projects. Assist academic staff with current research / enterprise projects.
- 17) Service, calibrate and carry out minor maintenance of laboratory equipment. Use initiative to resolve IT failures of scientific equipment.
- 18) Prepare audio visual aids, e.g., PowerPoint slides, lab manuals, integrated biomechanics software, video clips and student handouts, work sheets etc
- 19) Any such other reasonable duties and responsibilities as may be required from time to time including income generation or recruitment and retention of students.

### ***Standard Notification***

**These guidelines are provided to assist you in the performance of your contract. The university is a dynamic organisation; therefore, changes may be required from time to time. Any changes will be made in consultation with the post-holder. The Summary of Duties and Responsibilities is not intended to be an exhaustive list of tasks performed. Other associated technical tasks are likely to be performed as directed by the line manager.**

**The University is committed to the highest ethical and professional standards of conduct. Therefore, all employees are expected to have due regard for the impact of their personal behaviour and conduct on the University, students, colleagues, business stakeholders and our community. Each employee must demonstrate adherence to our Code of Professional Conduct. In addition, all employees should have particular regard for their responsibilities under Cardiff Metropolitan University's Equalities, Financial, Environmental and Sustainability, People Services and Health and Safety policies and procedures.**



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**PERSON SPECIFICATION**

Post: **Biomechanics Technician Demonstrator**

School: **Cardiff School of Sport and Health Sciences**

**\*Key**

A - Application form  
I - Interview  
T/P - Test/Presentation

FACTORS	ESSENTIAL AND DESIRABLE CRITERIA	ASSESSED BY		
		A*	I*	T/P*
<b>Education and Qualifications (Essential)</b>	Degree in sport and exercise science, biomechanics, engineering or another relevant discipline.	✓		
<b>Education and Qualifications (Desirable)</b>	Postgraduate degree in biomechanics or close to completion	✓		
	Health and safety qualifications (e.g. First Aid, COSHH, IOSH)	✓		
<b>Knowledge (Essential)</b>	Understanding of methodologies used in Biomechanics. (e.g., motion capture, force analysis, EMG etc).	✓		✓
	Understanding of force plate data analysis	✓		✓
	Appreciation and awareness of biomechanics laboratory equipment and consumables	✓	✓	
	Working knowledge of Health & Safety and the impact this has upon self and others	✓	✓	
	Awareness of ordering and stock control procedures	✓	✓	
<b>Knowledge (Desirable)</b>	Understanding of pedagogical principles that underpin student-centred teaching and assessment.	✓	✓	
<b>Skills and Abilities (Essential)</b>	Ability to plan, prioritise and organise own work and use initiative to progress requests made by others with the effective use of resources to achieve agreed objectives	✓	✓	✓

	<p>Aptitude in the preparation of audio-visual materials and teaching resources.</p> <p>Ability to demonstrate to others specific tasks or techniques on a specialist process within the post-holder's remit on an individual or group basis</p> <p>Able to provide guidance to students, and give feedback on their progress to academic staff</p> <p>Effective written and oral communication skills</p>	✓	✓	✓
	<p>Ability to work under pressure</p> <p>Ability to undertake a doctorate</p> <p>Independent use of motion analysis hardware such as Vicon and software (Nexus).</p> <p>Proficiency in at least one programming language (e.g., Matlab, Python, R).</p>	✓	✓	
<b>Skills and Abilities (Desirable)</b>				
	<p>Experience and expertise with scientific laboratory equipment including calibration procedures and minor maintenance</p> <p>Experience of laboratory practices</p> <p>Experience of appropriate computer hardware and software packages for data collection (Vicon Nexus, CodaMotion, Qualysis, or similar) and data analysis (Visual3D, Matlab or similar)</p>	✓	✓	
<b>Experience Paid/Unpaid (Essential)</b>				
	<p>Experience of both Windows and Mac operating systems</p> <p>Working with biomechanics scripting language (e.g. Visual3D).</p>	✓	✓	
<b>Experience Paid/Unpaid (Desirable)</b>				
	<p>Proven ability to work as an individual and as part of a team.</p> <p>Interest in sport, sports science, strength and conditioning, rehabilitation and massage and a desire to share knowledge and motivate students.</p>	✓	✓	
<b>Other Requirements (Essential)</b>				
<b>Other Requirements (Desirable)</b>				

<b>Welsh Language Skills (Desirable)</b>	<b>Listening</b>  A1 - Beginner Can understand and use familiar everyday expressions and very basic phrases in Welsh	✓		
	<b>Reading</b>  A1 - Beginner Can understand and use familiar everyday expressions and very basic phrases in Welsh	✓		
	<b>Speaking</b>  A1 - Beginner Can understand and use familiar everyday expressions and very basic phrases in Welsh	✓		
	<b>Writing</b>  A1 - Beginner Can understand and use familiar everyday expressions and very basic phrases in Welsh	✓		