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Description automatically generated**

Job Description

Post title:Laboratory Technician - Environmental Engineering

Date last updated/evaluated: January 2025

Author: Andrew Giles

Standard Occupation Code: to be completed

School / Department: School of Engineering

Faculty / Directorate: Faculty of Engineering and Physical Sciences

Job Family: Technical and Experimental (TAE)

Grade: Level 4

ERE Pathway (if applicable): Not applicable

Post reporting to: Senior Technical Manager

Post line report(s):

Post base location: Campus **:** Future Towns Innovation Hub, Chilworth.

Job purpose: To provide experimental, technical and training support for research and teaching activities, give day-to-day guidance to other technicians working on research contracts within the Environmental Laboratories.

Supervising a range of complex work activities requiring awareness and consideration of wider implications within established practices, procedures and policies. Ensuring safe operation of the Environmental Laboratories.

Act as Area Safety Officer.

Day-to-day activities are not usually closely supervised, but guidance is available, and outputs are subject to managerial review.

## Key accountabilities and indicative time allocation:

1. **35%**

Advise laboratory users on the design, construction and safe operation of experimental apparatus. Provide instruction and training in the use of complex instruments for specialised and non-routine measurements. Give advice and practical assistance on the design of experiments, the development and application of specialist methods, and the interpretation of results. Where necessary develop novel techniques and procedures to a level where these can be reliably carried out to give appropriate results in a specialised research environment.

1. **30%**

Maintain complex instrumentation and equipment in good working order, by diagnosing and rectifying faults and carrying out corrective and preventative maintenance, where necessary liaising with equipment manufacturers and suppliers for specific advice or to arrange repairs or maintenance visits.

Provide training to other technical staff and researchers on carrying out routine maintenance, fault-finding and repairs. Advise the Faculty Technician Manager, Heads of Research Groups and Head of Academic Unit or their deputies on physical resource requirements including equipment replacement schedules, specifications and pricing, and space needs.

1. **30%**

In conjunction with the Analytical Technician:

- Ensure that standard laboratory and field equipment (such as pH and other meters, pipettors, automatic burettes, pressure meters, centrifuges, balances, water de-ionizers, incubators, ovens and furnaces) is maintained in good working order.

- Monitor and make up standard solutions and chemical reagents as required and carry out standardisation procedures.

- Organise and maintain equipment manuals and standard laboratory methods.

- Ensure that the tasks necessary to provide a safe, tidy and unobstructed working environment for all laboratory users are carried out in accordance with safety regulations, standard procedures, good laboratory practice and the University Safety Policy.

- Carry out induction of new laboratory users and provide continued support enabling staff and students to comply with standard practices and safety procedures.

- Liaise with the University Safety Office for advice on laboratory safety and on the storage, shipping and safe disposal of materials and the testing of equipment, including electrical safety testing.

- Ensure maintenance of adequate stocks of laboratory consumables (including bottled gases and minor equipment spares) to meet the requirements of teaching and research.

- Ensure that requisitions and orders generated in connection with laboratory activities are fully compliant with the University's Safety Policy, budgetary resources, ordering procedures and financial reporting requirements.

- Organise the management of industrial and special gases for safe and cost effective use ensuring that equipment and storage comply with the relevant codes of practice and recording requirements. Manage or oversee assigned resources, monitor relevant budgets and contribute to short and medium-term resource planning processes. Advise on future resource requirements within own area.

1. **5%**

Any other duties as allocated by the line manager following consultation with the post holder.

Internal and external relationships:

• Close and proactive liaison with other technical staff within the laboratories, to ensure that joint research and teaching activities are performed with maximum efficiency where shared resources are used.

• Work with postgraduate research students, Research Assistants and Fellows and Academic Staff within the Faculty and other institutions as appropriate.

• Liaise with School, Faculty and University Safety Office for safety information, disposal of hazardous substances and loan of equipment.

• Liaise with suppliers of laboratory equipment, consumables and gases for technical advice regarding set up, servicing and maintenance of equipment and ordering of specialist items to maintain activities within the laboratories.

Special requirements:

To have or obtain up-to-date inoculation status for tetanus

# Person Specification – Skills and Competencies

All essential and desirable criteria outlined in this Person Specification will be assessed through a combination of recruitment application and CV, and where applicable numerical or written assessment.

**Knowledge, Experience and Qualifications**

Essential

* Substantial and authoritative practical knowledge and experience in the required operational discipline, supported by general theoretical understanding.
* The required level of knowledge and understanding will normally have been gained through some or all of the following:
  + Considerable work experience
  + Vocational training
  + Formal qualification(s) equivalent to Level 5 or 6 of the [Regulated Qualifications Framework](https://www.gov.uk/what-different-qualification-levels-mean/list-of-qualification-levels) e.g. foundation degree or degree with honours, or Level 5 or 6 award, certificate, diploma, NVQ.
* Knowledge, experience and competence may also be evidenced through professional registration:
  + Professional registration at the Registered Scientist (RSci) level will typically indicate partial competence at TAE Level 4.
  + Professional registration at the Incorporated Engineer (IEng) level will typically indicate full competence at TAE Level 4.

Desirable

* Recognised safety qualification.
* Contribution to scientific publications.
* PhD

**Teamwork and Communication**

Essential

* Delegates and/or collaborates effectively, understanding the strengths and weaknesses of colleagues.
* Works proactively with colleagues and other stakeholders, within and beyond the University, to achieve outcomes.
* Communicates effectively to develop understanding and achieve cooperation.
* Provides clear specialist advice, guidance and recommendations on complex issues.

**Planning, Organisation and Resource Management**

Essential

* Plans and progresses a rage of work activities within broad professional guidelines and established University policies and procedures.
* Formulates development plans to meet current skill requirements.

**Problem Solving and Initiative**

Essential

* Develops detailed understanding of long-standing and/or complex problems and applies professional knowledge and experience to resolve them.
* Demonstrates an awareness of principles and trends in a professional or specialist field and awareness of how this affects activities in the University.

# Job Hazard Assessment

A full health clearance is required for this role where any hazards marked “**^**”, using the agreed Occupational Health referral template [available from here](https://sotonac.sharepoint.com/teams/HealthWellbeing/SitePages/Occupational-Health.aspx). Where a full health clearance is required, this will apply to all role holders, including existing members of staff.

## Physical Environment

Working outside **^** Occasionally <30% Time

Exposure to noise levels >80dbA **^** Not applicable

Working with dust or fumes **^** Occasionally <30% Time

Working with skin irritants **^** Occasionally <30% Time

Working with chemicals (industrial or cleaning) **^** Occasionally <30% Time

Working in a confined space **^** Not applicable

Working at height **^** Not applicable

Working with sewage **^** Frequently 30-60% Time

Contact with cytotoxins **^** Occasionally <30% Time

Exposure Prone Procedure (EPP) work **^** Not applicable

Contact with clinical specimens or pathology work **^**  Not applicable

Direct patient care or patient contact Not applicable

Exposure to temperature extremes Occasionally <30% Time

Frequent hand washing Not applicable

Ionising radiation Not applicable

## Psychological and Social Environment

Working shifts **^** Not applicable

Working nights **^** Not applicable

Lone working Not applicable

Working with children Not applicable

Exposure to persons with challenging behaviourNot applicable

Working with larger groups Not applicable

## Equipment, Tools and Machines

Working with vibrating machinery or tools **^** Not applicable

Driving duties e.g. LGV, PCVs, forklift trucks **^** Occasionally <30% Time

Food handling Not applicable

Contact with latexNot applicable

## Physical Abilities

Prolonged physical movements or actions e.g. walking **^** Not applicable

Prolonged Standing or Sitting **^** Occasionally <30% Time

Moving or handling heavy loads **^** Occasionally <30% Time

Repetitive pulling or pushing **^** Not applicable

Repetitive climbing (steps, stools, ladders, stairs) **^** Not applicable

Repetitive crouching, kneeling or stooping Not applicable

Repetitive lifting Not applicable

Fine motor grips (e.g. pipetting) Occasionally <30% Time

Repetitive reaching below shoulder height Not applicable

Repetitive reaching at shoulder height Not applicable

Repetitive reaching above shoulder height Not applicable

# Behaviours

Our [Inclusion and Respectful Behaviour Policy](https://www.southampton.ac.uk/about/governance/regulations-policies/policies/inclusion-respectful-behaviour) describes the expectations of everyone who is a part of our community.

Our **Southampton Behaviours** (below) outline the responsibilities we each have in working collaboratively to achieve our University strategy.

**Personal Leadership**

- I take personal responsibility for my own actions and an active approach towards my development.

- I reflect on my own behaviour, actively seek feedback and adapt my behaviour accordingly.

- I demonstrate pride, passion and enthusiasm for our University community.

- I demonstrate respect and build trust with an open and honest approach.

**Working Together**

- I work collaboratively and build productive relationships across our University and beyond.

- I actively listen to others and communicate clearly and appropriately with everyone.

- I take an inclusive approach, value the differences that people bring and encourage others to contribute and flourish.

- I proactively work through challenge and conflict, considering others’ views to achieve positive and productive outcomes.

**Developing Others**

- I help to create an environment that engages and motivates others.

- I take time to support and enable people to be the best they can be.

- I recognise and value others’ achievements, give praise and celebrate their success.

- I deliver balanced feedback to enable others to improve their contribution.

**Delivering Quality**

- I identify opportunities and take action to make improvements.

- I plan and prioritise efficiently and effectively, taking account of people, processes and resources.

- I am accountable for tackling issues, making difficult decisions and seeing them through to their conclusion.

- I encourage creativity and innovation in others, to deliver workable solutions.

**Driving Sustainability**

- I consider the impact on people before taking decisions or actions that may affect them.

- I embrace, enable and embed change effectively.

- I regularly take account of external and internal factors, assessing the need for change, and gaining support to move forward.

- I take time to understand our University strategy and communicate this to others.