Job Description – Research Technician (Microbiology), Astrobiology Research Group

Full time
Permanent
Grade 6
Walton Hall, Milton Keynes-based

The Role

The post-holder will be welcomed into an interdisciplinary research group investigating the feasibility of life beyond the Earth, and the associated social, legal and economic implications. In their role, they will carry out various microbiology and molecular biology duties to support the ongoing research of the Astrobiology Research Group. They will work closely with the research staff and students to enable the delivery of the Group’s research objectives.

Key responsibilities

- Preparation of both anaerobic and aerobic media for maintaining cultures and for isolating microorganisms;
- Cell enumeration by fluorescent microscopy;
- DNA extraction from both environmental samples and isolated microorganisms using bespoke in-house protocols;
- PCR amplification and preparation of products for sequencing.
- Recording of data and basic analysis as requested by the Post-doctoral researchers;
- Ensuring good laboratory practice by maintaining cleanliness and stock supplies
- Supporting lab visitors and students in the use of equipment and analysis of samples.
- Providing additional support to research staff and students within the Group as required;
- Assisting with field work as required;
- To have a strong commitment to the principles and practice of equality and diversity;
- To undertake other duties, as agreed by the Laboratory Manager and the Group’s lead.
Person Specification

Skills and experience

_Essential:_
- Undergraduate degree in a STEM subject (preferably microbiology, molecular biology, environmental or biological sciences with a strong element of microbiology);
- Proven laboratory experience;
- Demonstrable practical experience of working within a Higher Education / scientific research establishment;
- Practical experience in technical support;
- Relevant technical knowledge of equipment typically used in life science and chemistry laboratories;
- A good understanding of H&S legislation, and its application in a relevant laboratory environment;
- Demonstrable organisational, planning and problem-solving skills, including ability to anticipate and analyse problems and introduce workable solutions;
- Excellent interpersonal and negotiating skills, with the ability to influence others over whom there is no formal authority;
- Proven ability and capacity to adapt quickly, flexibly and effectively to change;
- Experience of working effectively within;
- Good oral and written communicating skills;
- Good negotiating and influencing skills;
- Have a clean UK driving licence.

_Desirable:_
- Applicants should have or be working towards professional registration RSciTech, RSci or CSci.
About the Astrobiology Research Group

Research England has recently awarded the Open University Astrobiology Research Group an Expanding Excellence in England grant worth £6.7 million. This will allow the Group to expand to bring together expertise in technology, international development and governance to address the scientific and governance challenges associated with the advancement of astrobiology and related space exploration missions. This will result in a multi-disciplinary research environment with members spanning three Faculties: The Faculty of Science, Technology, Engineering and Mathematics, the Faculty of Business and Law, and the Faculty of Arts and Social Sciences.

The primary aims of this multi-disciplinary group will be as follows:
1. furthering the understanding of the limits of life and potentially habitable environments in the Solar System;
2. identifying chemical and geochemical signatures that could be used as evidence of life;
3. investigating the survivability of microorganisms and their biosignatures;
4. educating and engage with the space sector, policymakers and the public in the UK and ODA countries;
5. examining critically the governance and ethical implications of astrobiology-related space missions to develop and enhance governance frameworks.

The OU Astrobiology Research Group is committed to building an inclusive research environment. The Group supports flexible working arrangements, within the limits of the post, and particularly welcomes applications from groups traditionally under-represented in STEM.
About the Unit

Faculty of Science, Technology, Engineering & Mathematics
The Faculty of Science, Technology, Engineering and Mathematics (STEM) is comprised:

- School of Computing & Communications
- School of Environment, Earth & Ecosystem Sciences
- School of Engineering & Innovation
- School of Life, Health & Chemical Sciences
- School of Mathematics & Statistics
- School of Physical Sciences
- Knowledge Media Institute
- Deanery including teams supporting Curriculum, Research and Enterprise, Laboratory Infrastructure and Faculty Administration

“We aspire to be world leaders in inclusive, innovative and high impact STEM teaching and research, equipping learners, employers and society with the capabilities to meet tomorrow’s challenges”

The Faculty of STEM consists of 700 staff and 1,800 Associate Lecturers. The Faculty delivers over 185 modules across undergraduate and postgraduate curriculum, supporting nearly 19,000 students (full time equivalents) which is 29% of the OU total.

The Faculty generates more research income (circa £17M) than any other Faculty in the University, supported by a comprehensive laboratory infrastructure.

We are proud of our distinctive values and capabilities underpinning our aspiration:

We are inclusive:
- We transform people’s lives, ensuring STEM education is openly accessible to many thousands of students from diverse backgrounds – our students express high satisfaction with their study experience.
- We engage the public in exciting citizen science and engineering, including through free open educational resources, multi-platform broadcasting, outreach to inspire the next generation and with programmes to encourage more women into STEM.

We are highly innovative:
- We are at the forefront of innovative developments in teaching practical science and engineering at a distance, through simulated and remote access laboratories and practical experimentation.
- Our high-quality teaching and curriculum are informed by world-leading research, strong links with professional bodies and communities of practitioners, as well as by scholarship focused on continuously improving our STEM pedagogy.

We deliver significant social and economic impact:
- We provide STEM higher education at a scale and reach unsurpassed in the UK, with a sizeable international reach and further growth potential.
- We inject transferable STEM skills and knowledge direct into the workplace for immediate employee and employer benefit, as students combine study while working.
• The employability value of our courses is underpinned by accreditation from leading STEM Professional Bodies and Learned Societies, as well as partnerships and sponsorship with leading employers.

• Our high quality, applied and academically relevant teaching and research addresses real-world issues, delivering impact for industry and society, including addressing pressing STEM skill-shortages across the UK.