

THE UNIVERSITY OF MANCHESTER

PARTICULARS OF APPOINTMENT

FACULTY OF SCIENCE & ENGINEERING

SCIENCE AND ENGINEERING

SCHOOL OF NATURAL SCIENCES

SENIOR TECHNICIAN (RESEARCH – SYNTHETIC BIOLOGY AND GENOMICS)

VACANCY REF: SAE-024835

Salary:	Grade 5 £30,487 to £34,980 per annum depending on relevant experience
Hours:	Full Time (1 FTE)
Duration:	Fixed Term: 2 years (with possibility to extend)
Location:	Oxford Road, Manchester

Enquiries about the vacancy, shortlisting and interviews:

Reporting to: Derren Heyes, Senior Technical Specialist, Biophysical and Biochemical Sciences based in the lab of Patrick Cai

Email: Derren.heyес@manchester.ac.uk or yizhi.cai@manchester.ac.uk

Overall Purpose of the Job:

The University of Manchester (www.manchester.ac.uk) is one of the largest single-site universities in the UK, with one of the biggest student communities. In total, 25 Nobel Prize winners have worked or studied here and 93% of our research was ranked as 'world-leading' or 'internationally excellent' by the Research Excellence Framework in 2021.

Furthermore more than nine out of ten of our recent graduates go straight into employment or continued studies. The Faculty of Science and Engineering (FSE) comprises two multi-discipline Schools; the School of Engineering and the School of Natural Sciences, each led by a Head of School and Head of School Operations. The School of Engineering is made up of seven academic departments and the School of Natural Sciences is made up of five academic departments. For more information please visit <https://www.se.manchester.ac.uk/>.

We are seeking an enthusiastic and proactive Senior Technician (Synthetic Biology and Genomics) to join our dynamic technical operations team, which strives to provide a sector leading technical support for FSE and the wider University. With a commitment to customer service excellence and a passion for science and engineering, the Senior Technician (Synthetic Biology and Genomics) will provide an agile technical support service to staff and students to support teaching, research and professional services. FSE's research and teaching quality is recognised

globally; this is an exciting opportunity to join us in Manchester and contribute to the provision of a sector leading technical service.

This position forms part of Manchester's development of synthetic biology approaches for next generation biotechnology, and will be based in Professor Patrick Cai's research group. The group is located in the Manchester Institute of Biotechnology (MIB), a unique cross-disciplinary research institute at the University of Manchester, which brings together more than 450 researchers with expertise in the foundational sciences supporting Synthetic Biology, including molecular biology, chemistry, engineering, materials science, computer science and medicine and as such is at the forefront of international developments in the emerging science of Synthetic Biology.

The Cai laboratory has pioneered the design, construction and characterization of completely synthetic eukaryotic chromosomes. The group is actively exploring new applications of artificial chromosome technology, including the generation of novel natural product-like chemical matter. Cai lab was recently awarded a Bill and Melinda Gates Foundation Global Challenge pilot grant to develop artificial chromosome-based strategies for discovery of novel anti-TB agents. We are now seeking to recruit a skilled senior technician to join the team with a good understanding and practical experience of modern molecular biology and biochemistry techniques. The purpose of this role is to:

- Provide expertise in lab media preparation for bacteria and yeast cell culture
- Support our ongoing research projects in the area of synthetic biology and genomics, and will assist with research projects under the supervision of the PI
- Work with the PI to ensure full compliance in microbiological health and safety procedures and be responsible for training / oversight of correct microbiological techniques
- Work closely with senior technology leads to ensure the timely and appropriate flow of data and protocols across the platforms to support the scientific vision.
- Contribute to research and research-based teaching in the area, provide support to PDRAs, PhD, MSC and UG students and ensure safety systems and procedures are kept up to date and relevant

MAIN DUTIES AND RESPONSIBILITIES

Equipment & Operations:

- Manage and monitor the day-to-day media usage of the laboratory. Monitor stocks of consumables and order as required. Prepare and maintain DNA and glycerol stocks and appropriate paperwork. Prepare lab common solutions and dropout plates
- Implement and monitor safety procedures in the laboratory in adherence to Health and Safety requirements and maintenance of a safe working environment. Complete COSHH, RA and other safety forms required for the group
- Assist in the training and support of PhD and project students as required, including preparation of rotas for shared lab responsibilities and equipment usage
- Independently plan and prioritise your own day-to-day tasks and how they are done based on your own knowledge and experience. Assist in workload allocation, prioritization and supervision of staff

- Fully support core and essential functions and assist in the support of specialist and more complex teaching and research areas in FSE
- Contribute to and influence the development and review of procedures and process based on your own knowledge and experience
- Fault find, troubleshoot and solve more complex equipment, building fabric and building services issues using your own advanced knowledge, experience and initiative
- Carry out routine inspections, maintenance, servicing, modification and repair on a range of infrastructure, instrumentation and equipment within FSE to ensure failures and breakdowns have very limited impact upon day-to-day building operations
- Liaise directly with technical and academic colleagues, external companies and vendors/contractors to resolve problems in a timely fashion in order to minimise impact on teaching and research activities
- Induct and train staff, students and visitors to safely carry out processes and procedures using basic to more specialist and complex scientific/engineering equipment and techniques
- Develop strong and effective working relationships with key University stakeholders in order to positive influence successful outcomes e.g. FSE and University Estates, H&S, equipment suppliers and engineers
- Communicate with all stakeholders to ensure that any equipment and building related issues/projects and the related consequences are known, and that timescales for recovery and completion are made clear
- Act as a reliable point of reference and source of information, advice and guidance to all stakeholders
- Ensure the delivery of service excellence and customer satisfaction
- Plan teaching and/or research resource requirements in advance, including maintaining appropriate stock and consumable levels, procurement of goods, liaising with colleagues and customers, etc
- Be responsive, agile and flexible based on service need across FSE i.e. learn new techniques and/or support other areas in the Faculty should the need arise
- Take day-to-day responsibility for the smooth and uninterrupted operation of teaching, research, buildings and building services
- Champion a culture of continuous improvement, collaboration, consistency and innovation; and engage constructively with change initiatives
- Be an active and enthusiastic member of the FSE technical operations community

Leadership & Management

- Supervise, motivate and develop junior staff and University of Manchester technical apprentices
- Mentor and support junior staff and apprentices

Governance & Compliance:

- Implement, comply with and monitor all relevant health and safety requirements in the workplace in order for the University to meet its legislative requirements and duty of care to all staff, students and visitors
- Thoroughly understand all H&S requirements, policies and procedures. Develop and set standards in liaison with School Safety Advisors
- Act in accordance with and promote university policies, procedures and requirements at all times, in particular those relating to health and safety; procurement; finance; equality, diversity and inclusion; and information governance
- Maintain a strong awareness of the Faculty's strategy to deliver world-class research and teaching performance as well as an understanding of how your area of work directly supports the vision and goals of the University
- Make a difference to the life and future of our region by embedding the University's social responsibility goals within the day to day operations
- Maintain a commitment to equality, diversity and inclusion

Key Relationships:

The role requires excellent communication skills in order to build and maintain effective collaborative relationships between all stakeholders in the Faculty of Science & Engineering and the wider University. Key relationships include:

Internal: FSE Technical Operations Team, Technical Team Managers, Professional Staff (PS) colleagues, apprentices, line manager, academic staff (research and teaching), health & safety advisors and the associated committee members, FSE and University Estates and Facilities, University IT Services, students and any other relevant staff from across the University.

External: Equipment and consumable vendors, external contractors, service engineers, visitors, professional bodies and external organisations.

PERSON SPECIFICATION

Qualifications:

A qualification in a science or engineering related subject area e.g. degree, HND, HNC, or significant work experience in a relevant technical, engineering or scientific role

Essential:

- Good training in microbiology and general biochemistry
- A strong collaborative team-based ethos is imperative
- We would expect the candidate to have familiarity with the concepts and technologies of synthetic biology
- Have a broad range of experience from working in a technical, or technical related role
- The ability to supervise, mentor and motivate
- A flexible and agile approach to working in a multi-disciplined environment

- A passion for customer service excellence
- Ability to lead and deliver technical operations
- Professionalism and confidentiality
- Experience of working in a team environment within a large organisation, supporting colleagues and freely sharing knowledge and expertise for the benefit of the wider team
- Highly developed interpersonal skills, including tact, diplomacy and sensitivity
- An ability to communicate effectively with staff from across the University
- An ability to interpret data, and clearly and concisely explain information/requirements
- Excellent oral and written communication skills
- Excellent customer service ethos
- Excellent time management skills
- Excellent IT skills e.g. Microsoft Office, Excel, PowerPoint, etc
- Excellent numeracy, analytical, problem solving skills and the ability to identify problems and resolve issues effectively
- Excellent organisational skills with the ability to manage a large workload and prioritise tasks in order to meet deadlines
- Excellent knowledge, understanding and experience of implementing and applying relevant health and safety requirements in a science and engineering environment (e.g. risk assessments, operating procedures, COSHH assessments)
- A strong commitment to ongoing personal training and continued professional development (CPD) with a strong interest in acquiring new skills and competencies
- A commitment to the University's core values and to the provision of the best possible support to our students, staff and customers

Desirable:

- Health and Safety experience or qualification
- Experience of supporting and enabling research activities and contributing to outputs (e.g. grants and publications)
- A good record of collaborative research and technical work
- Knowledge of teaching and research operations gained from within a Higher Education setting
- Line management / supervisory experience

Expectations and Success Factors:

- To be a proactive team member and treat all colleagues and students with respect in accordance with well-established PS Behaviours
- To be willing to work across organisational boundaries
- To seek new knowledge and share ideas

- To be open and responsive to change and innovation

In-line with the University's terms and conditions, you will be expected to work such hours as are necessary for the proper discharge of your duties and responsibilities, with a notional minimum 35 hours per week through Monday to Friday. There may be occasions when some non-core hours work could be required, however the University operates arrangements to recognise out of hours working and to ensure an appropriate balance between working and non-working time.