Project Technician for Material Characterisation and Product Testing

Department: Strathclyde Institute of Pharmacy and Biomedical Sciences (www.strath.ac.uk/science/strathclydeinstituteofpharmacybiomedicalsciences/)
Faculty: Faculty of Science (www.strath.ac.uk/science/)
Staff Category: Technical Services
Reports To: Platform Lead
Salary Range: £23,067 – £25,941
FTE: 1 (35 hours/week)

Job Advert

CMAC is a world leading medicines manufacturing research centre that hosts a portfolio of collaborative research programmes aimed to transform the development and manufacture of medicines (www.cmac.ac.uk). Building on our long standing partnerships with a wide range of pharmaceutical manufacturers, technology providers and leading universities, we are establishing a new EPSRC-funded Centre focussed on enabling digital transformation. The Made Smarter Innovation – Digital Medicines Manufacturing Research Centre (DM²) is a 3.5-year programme that will accelerate the adoption of industrial digital technologies (IDTs) in the pharma sector across five core Platforms covering data, advanced manufacturing, digital QC, patient centric supply and networking and skills. The DM² Centre connects a leading multidisciplinary team of researchers across Strathclyde, Loughborough and Cambridge universities with leading digital technology providers, medicines manufacturers and healthcare providers, to drive a digital transformation in medicines manufacturing.

The five integrated Platforms designed by the academic and industrial researcher partners are: (1) The Data Platform; (2) Autonomous MicroScale Manufacturing Platform; (3) Digital Quality Control Platform; (4) Adaptive Digital Supply Platform; and (5) The DM² Network & Skills Platform.

This ambitious programme is supported by a large team of Post-doctoral Research Associates, Research Technicians and management staff to plan, deliver and disseminate the ambitious research, networking and training activities.

We are currently seeking applicants for a Project Technician based at the University of Strathclyde within Platform 2 - Autonomous MicroScale Manufacturing. This Platform will accelerate development of medicine products and manufacturing processes by creating agile, small-scale production facilities that rapidly generate large data sets and drive research. Robotic technologies will be assembled to create a unique small-scale medicine manufacturing and testing system to select drug formulations and processes and produce stable products with the desired performance. Integrating several IDTs will accelerate drug product manufacture, significantly reducing experiments and dramatically reducing development time, raw materials and associated costs.

This is a unique opportunity to help realise the next generation of pharmaceutical production facilities through the development and integration of a collaborative robot, cutting-edge sensors and manufacturing technologies. You will work closely with the DM² team to deliver the DM² Autonomous MicroScale Manufacturing Platform.

You will have a HNC or equivalent work-based experience in a physical science/engineering discipline (e.g. chemistry, materials science, chemical engineering, pharmaceutical sciences or a related discipline) with appropriate experience in the physical characterisation of powdered materials. Activities will involve the use of laboratory characterisation techniques to measure a range of physical properties such as flow function, particle size, density, porosity etc. as well as breaking force, contact angle, disintegration time and dissolution testing of solid oral dosage forms. You will also directly support the operation of the new MicroScale Manufacturing Platform.

You must have good verbal and written communications skills and you must also be able to work as a member of a team. You should be able to independently operate material characterisation instruments and manufacturing processes (e.g. tablet press, capsule filling machine), have good organisational skills, initiative, and the ability to pay close attention to detail.
Job Description

Brief Outline of Job:
As a Project Technician, this role will carry out laboratory characterisation and analysis of relevant pharmaceutical solid materials used for direct compression of tablets and filling of capsules. The main activities will be on characterisation of solid properties to feed into the Autonomous MicroScale Manufacturing Platform and the testing of mechanical and performance attributes of the final product (breaking force, disintegration, dissolution, contact angle etc.). The ambitious DM² Autonomous MicroScale Manufacturing programme will be realised by working closely with the entire DM² team and industrial partners.

Main Activities/Responsibilities:

1. Operate a range of laboratory analytical apparatus to characterise physical properties of powdered pharmaceutical materials.
2. Operate a range of manufacturing processes and testing instruments including a bin blender, tablet press, capsule filling machine, automated hardness tester, sessile drop analyser.
3. Assemble and record data in a structured manner within electronic systems data sets and in a format that can be integrated in the DM² Data Platform.
4. Conduct analytical method development to optimise and standardise laboratory measurement activities.
5. Prepare written reports and records of laboratory work.
6. Work closely with DM² colleagues to integrate the material, process and product data in the Platforms.
7. Engage in regular project meetings, sharing updates on work and collating feedback to ensure work aligns with the DM² programme.
8. Provide regular reports on progress to project team.
9. Liaise with vendors and internal staff to maintain laboratory equipment.
10. Demonstrate Autonomous MicroScale Manufacturing to project partners.
11. Engage in continuous professional development.

Person Specification

Educational and/or Professional Qualifications
(E=Essential, i.e. a candidate must meet all essential criteria to be considered for selection, D=Desirable)

E1 HNC in a physical science/engineering discipline (e.g. chemistry, materials science, chemical engineering, pharmaceutical sciences or a related discipline).

D1 Degree level qualification in a relevant discipline (e.g. chemistry, materials science, chemical engineering, pharmaceutical sciences or a related discipline).

Experience

E2 Existing experience in physical characterisation of solid powdered materials from a research or manufacturing environment.

E3 Knowledge and experience of laboratory health and safety practices.

D2 Experience of characterisation and production of oral solid dose forms or consumer products.

D3 Experience of testing mechanical and/or performance attributes of solid oral dosage forms.

Job Related Skills and Achievements

E4 Ability to plan and organise workload.

E5 Hands on practical skills in a laboratory and/or plant environment.

E6 Good organisational skills to plan, execute and report on project.

E7 Good computer literacy.

Personal Attributes

E8 Excellent interpersonal and communication skills, with the ability to listen, engage and persuade, and to present complex information in an accessible way to a range of audiences.
E9 Ability to work within a team environment.
E10 Good written and oral communication skills.
E11 Ability to work to deadlines with accuracy and precision.
E12 Proactive and able to use initiative.
D4 Ability to influence senior colleagues to implement change.

Other Relevant Factors
E13 Ability to balance work and time between conflicting demands.
E14 Able to present at project meetings.

Application Procedure
Applicants are required to complete an application form including the name of two referees who will be contacted before interview without further permission, unless you indicate that you would prefer otherwise. Applicants should also complete the Equal Opportunities Monitoring Form.

Other Information
Further information on the application process and working at Strathclyde can be found on our website (http://www.strath.ac.uk/hr/workforus).
Informal enquiries about the post can be directed to Dr Daniel Markl, DM² Co-I and Platform 2 Lead (daniel.markl@strath.ac.uk).

Conditions of Employment
Conditions of employment relating to the Research staff category can be found at: Conditions of Employment.

Rewards and Benefits
Our staff have access to a wide range of outstanding benefits that include financial rewards, family friendly and wellbeing benefits and career development opportunities, details of which can be found here.

Probation
Where applicable, the successful applicant will be required to serve a 6 month probationary period.

Pension
The successful applicant will be eligible to join the Local Government Pension Scheme (LGPS) in Scotland. Further information regarding this scheme is available from Payroll and Pensions.

Relocation
Where applicable, the University offers a relocation package to support new employees who meet the eligibility criteria. The relocation package is offered as a contribution towards costs incurred, and is designed to be flexible, allowing staff to use the financial support available in the way that will be most helpful to them. Further details are outlined in the Relocation Policy.

Interviews
Formal interviews for this post are scheduled to be held on 01/09/2021.

Equality and Diversity
We value diversity and welcome applications from all sections of the community.

The University currently holds a Bronze Athena SWAN award, recognising our commitment to advancing gender equality in academia across all academic disciplines and professional and support functions.

University Values
The University’s Values capture what we’re all about: who we are, what we believe in and what we stand for. Our Values have been derived from how we act and how we expect to be treated as part of Strathclyde.
1. GENERAL CONDITIONS
Members of staff are subject to the Charter and Statutes and the Ordinances and Regulations of the University, published in the Calendar, and to any amendments or additions thereto approved by the University Court and, in the case of the Charter and Statutes, the Privy Council. Staff are also expected to familiarise themselves with, and adhere to, general University policies and procedures, as published on University web pages.

The University Court recognises UNITE as the sole body with which it will negotiate and consult on all collective issues concerned with the terms and conditions of employment of Technical Services Staff. Such terms and conditions may be varied by the University Court after negotiation and consultation with UNITE.

Each member of staff may be responsible for the proper performance of allocated duties to the person or persons specified in the member of staff’s letter of appointment and any accompanying papers. Members of staff may not accept outside paid work including personal consultancies without the permission of the University, which will not be unreasonably withheld.

The University is committed to ensuring that its business is conducted in an open and transparent manner and will take all appropriate steps to address risks of bribery or corruption. Members of staff are required at all times to act honestly and with integrity and to safeguard the resources for which they are responsible. The University has in place a robust Public Interest Disclosure (Whistleblowing) Policy to enable concerns to be brought to its attention. This is available at www.strath.ac.uk/publicinterestdisclosure. Other relevant policies, e.g. Fraud Prevention and Conflicts of Interests, can also be found on the University’s website.

Any member of staff may at any time be exposed to commercially sensitive information, information related to potentially valuable intellectual property or information which may otherwise be of a confidential nature. This information, which could be found anywhere in the University, may be written or disclosed orally, can include information of a commercial or technical nature, and may be owned by the University or by third parties. The University requires all employees to keep any such information confidential in the first instance and not disclose, publish or otherwise disseminate it without prior consent of the University. Such confidentiality obligations are commonplace and in the commercial interests of the University. When in doubt advice should always be sought from Research and Knowledge Exchange Services prior to disclosure.

The University operates probationary periods for new staff, the duration of which will be specified in individual letters of appointment. The normal probation period for posts in this staff category is 6 months. Further guidance on probationary procedures is published at http://www.strath.ac.uk/staff/policies/hr/.

Further information on the terms and conditions specified in this document and other staffing policies and procedures can also be found at www.strath.ac.uk/hr.

2. SALARY
Appointments are made at an appropriate salary point on the University’s grading structure, with initial placing determined according to qualifications and experience. Increments are paid to staff on 1 August each year, when the employee has a minimum of 6 full months of service at the appointed grade, allowing progression to the next point on the salary scale until the top guaranteed point of the scale is reached.

Salaries are paid directly to staff members nominated bank account, normally on the second last working day of the month.

3. HOURS OF WORK
The normal working week is 35 hours. Unless otherwise indicated in an individual’s letter of appointment, the normal hours are 9.00am to 5.00pm Monday to Friday with a one hour lunch break. Certain members of staff may be required to work some hours outwith this normal pattern and this should be agreed locally.

Operational requirements vary significantly across the University and therefore, where local circumstances dictate, reasonable variation may be adopted dependent upon operational needs. In such situations your Head of Department/School/equivalent will discuss with you the alternative arrangements that will apply.

4. HOLIDAYS
Annual leave entitlement is 27 days per year to be taken by agreement with the line manager. For staff members working on a part-time basis, holidays will be calculated on a pro-rata basis.

In addition to annual leave there is an entitlement to eleven public holidays per year which should be taken on days that the University is closed for this purpose. The University presently closes for four additional days over the Christmas and New Year period. These additional days count against the annual leave entitlement.

For staff members working on a part-time basis, public holiday entitlement will be calculated on a pro-rata basis.

Annual leave and public holiday entitlements should be taken in the leave year to which they relate. Up to five days leave can be carried forward into the new leave year subject to line management agreement. In exceptional circumstances, Heads of Department/School/equivalent may approve carry forward of accrued annual leave in excess of five days.

The University’s expectation is that staff take all accrued holidays prior to their termination date. If staff have exceeded their entitlement the University will deduct an equivalent number of days pay from final salary payments.

5. SICKNESS ABSENCE
During any period of absence through illness or injury provided the appropriate notification and certification procedures have been followed the University will pay a member of staff (having taken account of the aggregate of all periods of absence due to illness during the twelve months immediately preceding the first day of the current absence) as follows:

<table>
<thead>
<tr>
<th>Period of Continuous Employment at start of absence from work</th>
<th>Full Pay</th>
<th>Half Pay</th>
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<tr>
<td>Less than 1 year</td>
<td>1 month</td>
<td>1 month</td>
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<tr>
<td>1 year but less than 2 years</td>
<td>2 months</td>
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<td>2 years but less than 3 years</td>
<td>4 months</td>
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<td>3 years but less than 5 years</td>
<td>5 months</td>
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In order to manage the University’s sick pay scheme the University requires to maintain sickness absence records on individual members of staff. When making payments after the expiry of statutory sick pay the University will deduct an amount equivalent to any benefit normally payable by the Department of Work and Pensions. For full details on the general University policy in this area please refer to the Sickness Absence Management Policy at [www.strath.ac.uk/staff/policies/hr](http://www.strath.ac.uk/staff/policies/hr).

6. PENSIONS

At the start of their appointment, new members of staff aged under 75 will automatically be admitted to membership of the Local Government Pension Scheme (LGPS). If you are already in receipt of a pension from LGPS and your benefits relate to service prior to 01/04/2015 then you are required to notify the scheme of your new position regardless of whether you decide to remain a member of the scheme at the University of Strathclyde.

LGPS requires a contribution from the member and a contribution, as a percentage of pensionable pay, is made by the University. The contribution rates that currently apply can be viewed here: [https://www.spfo.org.uk/index.aspx?articleid=14879](https://www.spfo.org.uk/index.aspx?articleid=14879).

If your post is located out with the UK in an EU member state, then pension rules do not permit us to enrol you to the scheme.

New members of staff may opt out of LGPS within three months of taking up appointment and will then be treated as if they had never been a member of the scheme. Any member of staff choosing to withdraw from LGPS during their employment with the University, and who is withdrawing after three months' membership but with less than two years' membership, may be entitled to a refund of contributions (less any statutory deductions). Staff withdrawing from the Scheme with more than two years' membership are entitled to a deferred pension benefit. Any member of staff who wishes to opt out should contact the Pensions Team, Finance, in the first instance ([pensions@strath.ac.uk](mailto:pensions@strath.ac.uk)).


7. PLACE OF WORK AND RESIDENCE

Members of staff will be based on the John Anderson Campus, unless otherwise stated in the letter of appointment. The Department/School in which the post is initially placed will be specified in the letter of appointment although there will be an expectation to work at such other places as required in the course of employment.

If the need arises for members of staff to work outside the UK for a period (or periods) of more than one month then such arrangements will be subject to mutual agreement. Members of staff would then be provided with a statement in advance setting out the terms covering such periods of employment.

The University does not normally place specific restrictions upon the place of residence of members of staff. All staff are, however, expected to reside in a location which is compatible with the satisfactory fulfilment of all the duties associated with their appointment.

8. DISCIPLINARY AND GRIEVANCE PROCEDURES

Further information on the University's disciplinary and grievance procedure can also be found at [www.strath.ac.uk/policies/hr](http://www.strath.ac.uk/policies/hr) or on request from Human Resources.

9. NOTICE AND TERMINATION

The employment of a member of staff is terminable by at least one months’ notice, in writing, on either side, except during the probationary period when the notice period is one week. If notice is being given by a member of staff earlier release may be granted if this can be arranged without detriment to the work of the department or area. If the appointment is for a fixed term period it will expire at the end of the period without the necessity for notice. Fixed term contracts may be terminated by either party short of the expiry date by the serving of one month's notice in writing. The University is not obliged to continue a fixed term appointment beyond the specified employment period.

Revised November 2017