

# Applications Engineer (KTP Associate)

Department	Strathclyde Institute of Pharmacy and Biomedical Sciences ( <a href="http://www.strath.ac.uk/science/strathclydeinstituteofpharmacybiomedicalsciences/">www.strath.ac.uk/science/strathclydeinstituteofpharmacybiomedicalsciences/</a> )		
Faculty	Faculty of Science ( <a href="http://www.strath.ac.uk/science/">www.strath.ac.uk/science/</a> )		
Staff Category	KTP	Reference No	I8378
Reports To	Cameron Brown (Academic Supervisor), Niall Mitchell (Company Supervisor)	Grade:	RS79
Salary Range:	£43000 - £46000, plus £4k training and development budget	Contract Type:	Fixed Term (24 months)
FTE	1 (35 hours/week)	Closing Date	10/10/2019

## Job Advert

CMAC Future Manufacturing Research Hub in Continuous Manufacturing and Advanced Crystallisation ([www.cmac.ac.uk](http://www.cmac.ac.uk)) in partnership with Process Systems Enterprise (PSE) Limited ([www.psententerprise.com](http://www.psententerprise.com)) are seeking to appoint a Knowledge Transfer Partnership (KTP) Associate in the area of process modelling, with a focus on developing and commercialising enhanced software, encompassing industrial workflows for the application of a user-friendly mechanistic modelling toolkit.

Formed in 1997, PSE is a world leading supplier of Advanced Process Modelling (APM) technology and related model-based engineering services to the process industries (industries with continuous and/or batch material production processes). We help clients to: Create value through the application of APM, explore the process decision space rapidly to reduce uncertainty and make better, faster and safer design/operating decisions through deeper process understanding. Our gPROMS FormulatedProducts (gFP) tool is used by a range of pharmaceutical, consumer good and food companies for digital design and digital operation of their formulated products and associated manufacturing processes.

The project is part of the Knowledge Transfer Partnership (KTP) programme that aims to help businesses to improve their competitiveness and productivity through the better use of knowledge, technology and skills that reside within the UK knowledge base. Successful Knowledge Transfer Partnership projects are funded by UK Research and Innovation through Innovate UK and are part of the government's Industrial Strategy. To find out how KTP works and the vital role you will play if you successfully secure a KTP Associate position please visit: [www.ktpws.org.uk](http://www.ktpws.org.uk)

To be considered for the role you will be educated to a minimum of a PhD in a relevant subject (chemical engineering, mathematics, computer science, software engineering or related discipline) with appropriate experience in implementing existing models from literature and partners in a range of platforms, developing interfaces and communication of results to an audience with broad modelling experience. In addition to the KTP core development training, you will have a dedicated training budget of £4,000 to further support your career development. Location of this role is split 70/30 between PSE in London and CMAC in Glasgow, respectively.

## Job Description

### Brief Outline of Job:

Supported by the academic team at the University of Strathclyde and the Formulated Products team at PSE, the KTP Associate will deliver a step-change improvement in functionality and usability of gPROMS FormulatedProducts, with a view of taking technology currently deployed by expert users and putting it in the hand of everyday practitioners. Aforementioned improvements will be facilitated by an underpinning knowledge of both advanced continuous pharmaceutical processes and

how to integrate these to achieve robust mechanistic modelling tools for both batch and continuous end-to-end pharmaceutical manufacture.

### Main Activities/Responsibilities:

1.	Create industrial workflows for the application of a user-friendly mechanistic modelling toolkit
2.	Develop an enhanced gPROMS FormulatedProducts tool that is accessible to a wide range of users; from highly skilled niche engineers to non-expert process operators
3.	Provide common end-users of the global pharmaceutical industry with demonstrations and workshops on the final product through company site visits, conference & trade show demonstrations, online seminars, company newsletters and other marketing routes
4.	Document and share all data, reports and KTP outputs with the company through SOP's, interactive video tutorials, QC documents and digital demonstrators
5.	Liaise with industry/potential clients including PSE's Advanced Process Modelling Forum (APMF) partners
6.	Regularly report findings to PSE sales & marketing staff to ensure that project outputs inform both the business case and the marketing/launch of the enhanced tool.
7.	Deliver a range of training to the FormulatedProducts team and wider PSE staff, exploiting a combination of office-based training, workshops, seminars and where suitable, lab sessions
8.	Regularly interact with PSE project managers, product developers and application engineers, to facilitate both embedding of underpinning advanced continuous pharmaceutical processing knowledge, and application/translation of this knowledge to suitable industrial workflows and software models
9.	Completion of KTP Associate Final Report by the required deadline.

## 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. 1st Degree in a relevant subject (chemical engineering, mathematics, computer science, software engineering or related discipline)

E2. PhD or equivalent industrial experience in a relevant subject area (chemical engineering, mathematics, computer science, software engineering or related discipline)

### Experience

E3. One or more of the following general programming platforms: Aspen custom modeller, gPROMS, MATLAB, python

D1. Developing, implementing and applying mechanistic and/or empirical process models to achieve process improvements in Critical Quality Attributes (CQAs) and/or process understanding and/or control.

D2. Knowledge and experience of pharmaceutical processes

D3. Deployment of models for use across a range of industrial applications via simplified interfaces

### Job Related Skills and Achievements

E4. Awareness of the broader Commercial Drivers for the adoption of digitalization tools, such as mechanistic models to aid in digital design and operation.

E5. Ability to understand and interpret queries from a broad range of sources including researchers, staff and external collaborators.

### Personal Attributes

E6. Excellent written and oral communication skills.

E7. Demonstrable evidence of ability in presentation of outputs.

E8. Highly focussed on core objectives and target driven with the ability to work to tight deadlines and demonstrate prioritisation of work load.

E9. Proactive and able to use initiative.

E10. Ability to work within a team environment.

### Other Relevant Factors

D4. Postdoctoral experience would be beneficial for the role.

## Application Procedure

Applicants are required to complete an application form including the name of three referees who will be contacted before interview without further permission, unless you indicate that you would prefer otherwise. Applicants should also submit a Curriculum Vitae and a covering letter detailing the knowledge, skills and experience you think make you the right candidate for the job. 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/workforum>).

Informal enquiries about the post can be directed to Dr Cameron Brown, ([cameron.brown.100@strath.ac.uk](mailto:cameron.brown.100@strath.ac.uk) / 0141 444 7122).

### 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](#).

### Conditions of Employment

Conditions of employment relating to the KTP staff category can be found at: [Conditions of Employment](#).

### 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 Universities' Superannuation Scheme. Further information regarding this scheme is available from [Payroll and Pensions](#).

### Interviews

Formal interviews for this post will take place in November 2019 at Process Systems Enterprise (PSE) Limited in London.

### 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 women's careers in science, technology, engineering, maths and medicine (STEMM) employment in academia.

### 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.

