FURTHER PARTICULARS FOR THE ROLE

2 Lectureships in Chemical Engineering

School of Engineering and Applied Science

Reference Number: R120057

Closing date: 4 May 2012

Interview date: to be confirmed

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Chemical Engineering and Applied Chemistry

Research

Research activity is focused in the areas of development and analysis of new materials and processes with particular application to biological, environmental and energy systems. The membership of the Research Groups at CEAC comprises senior academic staff who have established international reputations and this has helped to foster strong links with industrial and academic partners - and to attract substantial research income.

Resources are focused into main Research Groups, each concentrating on projects that offer important opportunities for the exploitation of scientific and technological advances made by CEAC. The groups are:

- European Bioenergy Research Institute (including the Bioenergy Research Group)
- Bio-Materials & Bio-Molecular Science Research Group
- Polymer Research Group

As part of the Campus redevelopment, the Chemical Engineering and Applied Chemistry group will move to the Main Building during 2012. Also in 2012 the new EBRI building will be finished including a pilot scale biomass pyrolysis/gasification plant. This plant will be supported by staff in co-operation with industrial partners for training and research purposes. EBRI will operate at an international level together with industries in the field of thermal biomass conversion.

European Bioenergy Research Institute (EBRI)

Many Chemical Engineering staff at Aston are associated with EBRI. EBRI is one of the new research institutes at Aston University. Its research is focused on the thermal conversion of biomass. The objective of the European Bioenergy Research Institute is to apply chemical engineering science and technology to help provide the world with sufficient energy, fuels and chemicals from renewable and sustainable resources. To this end, the group is developing novel thermal processes whereby agricultural wastes, fast-growing wood, annual crops, biogenic wastes and algae can be thermally converted, using intermediate pyrolysis, into oils and gases which can be used to generate electricity and produce transport fuels and chemicals. These activities led to the development of new pyrolysis technologies and strategies of intermediate pyrolysis, with design, modelling, catalysis, optimization, biomass preparation, pre-treatment and conversion of biomass to syngas for different purposes. The intermediate pyrolysis process has been recently introduced to the market.

Teaching

The Chemical Engineering and Applied Chemistry Group undergraduate programme includes the following engineering and chemistry courses:

- MEng and BEng Chemical Engineering
- BSc Chemistry and BSc Applied Chemistry
- BSc Biological Chemistry

Full accreditation is given by the Institution of Chemical Engineers (IChemE) to the academic content of all the Chemical Engineering degree courses. Reflecting our established reputation, our Chemistry courses are recognised by the Royal Society of Chemistry.
ROLE DESCRIPTION

The Chemical Engineering programmes offered at Aston University have proved increasingly popular with students in recent years, and it has now become necessary to increase the Chemical Engineering staff. Two appointments to the role of Lecturer are sought. The posts are for an initial five year appointment. Teaching will be focused on core chemical engineering topics and will include elements of laboratory and project work, including research project supervision where links to the Group’s research activities are strong.

Applicants should have a good knowledge of chemical engineering through a degree qualification in this subject or one closely related. A PhD in a relevant subject area or equivalent experience is also required. Some experience of teaching and supervision at university level is expected. Where appropriate, there will be opportunities to develop research activities through the research groups within the Chemical Engineering and Applied Chemistry Group or the wider School.

All academic staff are required to undertake teaching duties, which includes the development of new teaching material, lecturing, tutorials, the supervision of both individual and group projects, supervision of PhDs and the development of materials within a virtual learning environment.

JOB DESCRIPTION

Job Title: Lecturer in Chemical Engineering

Grade: 8 or 9

Job Purpose: to contribute to, develop and enhance the research, teaching and community engagement activities of the School.

Duties and responsibilities:

Research

1. To lead and help structure research in the area of Chemical Engineering.
2. To pursue a personal research programme consistent with the research priorities of the School of Engineering and Applied Science.
3. To publish the outcomes of research in outlets of international standing.
4. To secure external research funding.
5. To supervise and manage research projects.
6. To supervise postgraduate students at Masters and Doctoral levels.
7. To collaborate in research initiatives with colleagues in and beyond the School of Engineering and Applied Science as appropriate.

Teaching

1. To cooperate with colleagues in the continuous review and development of Programmes and the curriculum.
2. To lead the development of curriculum and teaching materials for degrees in Chemical Engineering.
3. To be responsible for the design and content of specific areas of teaching and learning within the School's undergraduate and postgraduate programmes.
4. To teach undergraduate students and to carry out the associated examining and assessment processes.
5. To provide academic and pastoral support and advice to students.
6. To promote the use of a range of methods and techniques in teaching, learning and assessment.
7. To engage in the regular evaluation and development of modules for which the lecturer has responsibility, in terms of content, delivery and assessment.
8. To supervise PhD students.

Community Engagement

1. To be involved in activities to raise the regional profile of the subject group, particularly with schools and businesses.
2. To forge relationships with key local bodies.
3. To raise funding for third-stream activities and Intellectual Property exploitation.

Other related activities and functions

1. To carry out specific School roles and functions as may be reasonably required, these being equitably distributed across the academic staff.
2. To take part in the work of University or School Committees.
3. To engage in training programmes in the University (e.g. through Staff Development) which are consistent with the needs and aspirations of the Lecturer and the School.
4. To diligently support quality assurance measures within the University (e.g. by reviewing delivered modules annually, setting and receiving student feedback questionnaires).
5. To undertake such other duties as may be reasonably requested and that are commensurate with the nature and grade of the post.
## PERSON SPECIFICATION

**MOA = Method of assessment**

**Application Form (AF) Interview (I) Presentation (P)**

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| **Education / Qualifications** | • A PhD in a field of chemical engineering or a related subject  
• A degree in chemical engineering or a closely related subject | AF    |
| **Experience**   | • Experience of initiating and conducting research to doctoral level  
• Experience of publishing research outcomes  
• Experience in teaching of undergraduate students | AF/I/P |
| **Aptitudes and Skills** | • Ability to develop a research programme and to publish in international journals  
• Ability to secure research funds from external sources  
• Ability to lecture to undergraduate and postgraduate students in relevant subjects  
• Ability to take part in course and programme development  
• Ability to provide tutorial and counselling advice to undergraduate and postgraduate students  
• Competence in IT skills and Internet usage | AF/I/P |
| **Training and Development** | • A willingness to undertake further training as appropriate and to adopt new procedures when required  
• A willingness to obtain the University’s PG Certificate in Professional Practice (PGCPP)) within two years of appointment (where no equivalent teaching qualification is already held) | I     |
| **Other**        | • Commitment to observing the University’s Equal Opportunity policy at all times  
• Ability to attend the University as and when required for scheduled teaching, relevant meetings and student support. | I     |

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<td><strong>Education / Qualifications</strong></td>
<td>• Postgraduate Certificate in Teaching &amp; Learning in Higher Education, or equivalent qualification</td>
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<td><strong>Experience</strong></td>
<td>• Experience in the supervision of students and PhDs</td>
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<td><strong>Aptitudes and Skills</strong></td>
<td>• A track record of publications in international journals and presentations at international conferences</td>
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<td>• Ability to work in an international team</td>
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OUTLINE TERMS AND CONDITIONS OF THE APPOINTMENT

**Term of appointment:** The minimum period for which initial appointments are made is normally five years. However, the normal expectation is that Lecturers will transfer to a continuing appointment during this period on demonstrating acceptable performance in their research, teaching and other duties.

The appointment is either at Grade 8 (salary range for this grade is £31,948 - £35,938 per annum) or Grade 9 (salary range for this grade is £37,012 - £44,166 per annum). The level of appointment will be dependent upon academic qualifications and experience.

The appointment will be subject to the terms and conditions for Academic (Teaching) Staff Copies of these terms and conditions are available on [http://www1.aston.ac.uk/staff/hr/my-aston/](http://www1.aston.ac.uk/staff/hr/my-aston/)

**Hours:** This is a full time appointment

**Holiday entitlement:** 30 days leave per year plus 13 days University and Bank Holidays

**Pension:** Eligible staff are offered a defined benefit pension with the Universities Superannuation Scheme (USS).

**Research start up fund for new academics:** Individuals who have not previously held an academic appointment are eligible for a research start-up fund of £10,000 if laboratory based and £5,000 otherwise (pro rata for part time), in accordance with the rules of the University’s scheme. This fund must be spent on research activities and must be used within 18 months of starting the academic appointment at Aston University.

**Performance related pay:** In addition to the basic salary, the University operates a PRP scheme. Awards are determined on an annual basis.

**Consultancy:** Academic staff (Lecturers, Senior Lecturers, Readers and Professors) are permitted to use up to 50 days per annum for consultancy activities provided that the University is safeguarded against conflicts of interest (including IPR), indemnified against financial risk, fairly reimbursed for the use of any University facilities and provided that the activities undertaken do not detract from the contributions to Aston for which he or she is being employed.

The University’s policy paper ‘Consulting Policy at Aston’, is made available to newly-appointed academic staff during their induction.

**Qualifications:** Successful candidates will be required to produce evidence of their qualifications upon joining the University.

**Teaching qualifications:** It is the normal expectation that all teaching staff who are not able to
satisfy the requirements of an advanced teaching qualification (such as the University’s PG Certificate in Professional Practice (PGCPP)) on appointment should be able to do so within two years of appointment. This may be extended to four years in exceptional circumstances or where staff hold part-time posts.

**Relocation:**
Newly-appointed staff are required to establish their homes within reasonable daily travelling distance to and from the University. The University operates a relocation scheme to assist newly-appointed staff in meeting this requirement. Full details of the relocation scheme are included with offers of appointment.

**Medical examination:**
It is a condition of appointment that newly-appointed staff receive medical clearance from the University’s Health Centre.

**Eligibility to work in the UK:**
Candidates who are not citizens of the United Kingdom, or of another EEA member country, should ensure that they meet the requirements of one of the 5 tiers of the immigration points based system. Candidates should check their eligibility to enter or remain in the UK **in advance of making any job application** using the [points-based calculator](https://www.gov.uk/government/organisations/uk-border-agency) on the UK Border & Immigration Agency (UKBA) website. If you do not meet the minimum points requirement, you will not be able to work in the UK and any application for employment would be unsuccessful.

**Document checks:**
As a result of the implementation of sections 15 to 26 of the Immigration, Asylum and Nationality 2006 Act on 29 February 2008, the University requires all prospective and, in some cases, current employees, to provide documentation to verify their eligibility to work in the UK. Further information about these requirements can be found on the UK Border Agency website. [www.ind.homeoffice.gov.uk](https://www.ind.homeoffice.gov.uk).

Full details of the salary scales, terms and conditions of service and associated policies and procedures are available on the recruitment website.
FURTHER ADVICE

Please contact Professor Sahar Al-Malaika or Dr George Drahun for an informal discussion about the post:

Email: s.al-malaika@aston.ac.uk, j.a.drahun@aston.ac.uk

If you would like information on the progress of your application, or advice on any aspect of the appointment process generally, or the terms and conditions of service, please do not hesitate to contact:

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<th>Name</th>
<th>Role</th>
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<tbody>
<tr>
<td>Claire Freeman</td>
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EQUAL OPPORTUNITIES STATEMENT

Aston University undertakes to promote equality and diversity within the University Community in all aspects of its work. Further, it aims to ensure through its admissions policies for students and its recruitment and selection processes for staff that it encourages applications from all groups represented in the wider community at a local, national and international level. The University will endeavour not to discriminate unfairly or illegally, directly or indirectly, against students or potential students, staff or potential staff. This commitment applies to all functions of the University and to any stage of an individual’s career at Aston. For further details of policies and codes of practice on race, gender, disability, religion and belief, sexual orientation and age see: http://www.aston.ac.uk/staff/equalops/

An Equal Opportunities Monitoring Form is included with the application form.

DATA PROTECTION ACT 1998

Your application will only be used to inform the selection process, unless you are successful, in which case it will form the basis of your personal record with the University which may be stored in manual and/or electronic files. Information in statistical form on present and former employees is given to appropriate outside bodies.

Data you provide on the Equal Opportunities Monitoring Form will be included in a general database, for statistical monitoring purposes enabling the University to monitor the effectiveness of its Policy, Code of Practice and Guidelines on Equal Opportunities in Employment. Individuals will not be identified by name.