# Job Description

| General Details | |
|---|---|
| Job title: | Development Engineer - KTP Associate (CAE16/19) |
| School/Service: | Creative Arts & Engineering |
| Normal Workbase: | Alconbury Weston Ltd, Dewsbury Road, Stoke-on-Trent ST4 2TE |
| Tenure: | Fixed term for 24 months |
| FTE: | 1.0 FTE |
| Working Hours | 0830 – 1700 Monday to Friday |
| Grade/Salary: | £25,000 with performance related progression to £30,000 |

## Job Purpose

To project manage a two year KTP program taking ownership of the modelling, development of design and optimisation of a novel Absorption Refrigeration Cooling (ARC) system linking academic knowledge and industrial expertise to deliver a transformational system for transport refrigeration vehicles.

## Relationships

| | | |
|---|---|---|
| Reporting to: | Mr. Alastair Barton | (Alconbury Weston Ltd) |
| | Professor Tarik Al-Shemmeri | (Staffordshire University) |

## Main Activities

1. Through the induction process and initial familiarisation phase of employment become familiar with Alconbury Weston's procedures and ways of working. Learn the health and safety procedures for both Alconbury Weston LTD and Staffordshire University. Contribute positively to the health and safety performance of the business and University.
2. Become familiar with Alconbury Weston’s Absorption Refrigeration Cooling (ARC) system concept.
3. Once embedded into the business, take ownership of the modelling, development of design and optimisation of a novel Absorption Refrigeration Cooling system (ARC).
4. Document existing system: form project team with key internal stakeholders; review existing systems; understand the company’s business model; present and report upon key findings
5. Undertake practical experimental work to gather equipment performance data from the standard vehicle and refrigeration unit. Capture experimental results and transfer to model simulations. This will set system base lines for comparison during the project.
6. Hands on workshop engineering activity while working alongside the AWL team to Integrate / modify the standard refrigerated vehicle. It is estimated that up to 40% of the role will be carried out within the

workshop environment.

7. Evaluate modelled and experimental thermodynamic data to support the modification of current vehicle refrigeration process design. The successful candidate will need to understand how the models work and results are generated - not simply work with outputs.
8. Contribute to the design of heat capture and transfer mechanisms using the output from experimental and model data.
9. Prepare and present reports to AWL management and academic partners.
10. Work with AWL and academic partners to disseminate project knowledge through publication of papers, presentations and other media.
11. Engage in continuous professional development. Within the project budget there is funding set aside for personal / professional development.
12. Any other duties from time to time that may be necessary for you to undertake as set out by your company supervisor.
13. Assist with the preparation of sales tools & equipment launch to industry.
14. Communication with internal and external stakeholders
15. Final reporting of outputs and conclusions leading to the defined design, the outputs will support embedding the learnings into the AWL business.

**Special Conditions**

The appointment is available on a fixed term basis for 24 months

**Variation to Job Description**

Staffordshire University reserves the right to vary the duties and responsibilities of its employees within the general conditions of the Scheme of pay and conditions and employment related matters. Thus it must be appreciated that the duties and responsibilities outlined above may be altered as the changing needs of the service may require.

**Conditions of Service**

The post is subject to such terms and conditions of employment as negotiated between the Board of Governors of the University and the recognised trade unions, and/or the employees of the University. In negotiating such terms and conditions the Board of Governors will consider any appropriate advice received from the Universities and Colleges Employers Association (UCEA).

## Informal Discussion

Should you wish to discuss this vacancy informally before making an application please contact:
Alastair Barton or Steve Hulse at Alconbury Weston LTD on 01782 413427
(Please reference KTP Refrigeration Job Application)

## Application Procedure

We encourage you to apply on-line at our website http://jobs.staffs.ac.uk as the system is user friendly and simple to complete.

Please note that the University will not consider a Curriculum Vitae attached in support of your application and will not use this document in the shortlisting process. Consequently, we would ask all applicants to ensure that they have provided comprehensive information under each criteria in the Supporting Statements section of the application form and, if necessary, add any relevant additional information in the Additional Information Section.

# Person Specification

**Job Title:** **Development Engineer - KTP Associate (CAE16-19)**

**School/Service:** **Creative Arts and Engineering**

*The qualifications, experience, knowledge skills and personal qualities outlined below provide a summary of what is required to carry out this job effectively. They also form the selection criteria on which a decision to appoint will be made. Please ensure that you provide evidence of how you meet the criteria in your application.*

| No | **Selection Criteria Description** | **Essential [E] or Desirable [D]** | **Assessed by *** |
|---|---|---|---|
| 1 | Masters Degree in engineering or appropriate relevant discipline. | E | A |
| 2 | Good written and verbal communication skills | E | I |
| 3 | Demonstrable experience of data capture and modelling in an engineering or scientific background. | E | A/I |
| 4 | Ability to work with and convert captured data into a model system; and critically have the capability of understanding the working of a model and the dynamics of how inputs effect the output. | E | I |
| 5 | Experience of the practical application of engineering theory.<br>(As further explanation - while a significant proportion of the work will be office and computer based, hands on engineering work will be required while configuring and conducting trials on both model systems and vehicle engine and refrigeration units) | E | I |
| 6 | An energetic and enthusiastic approach to engineering projects. | E | I |
| 7 | Analytical approach to solving engineering problems, demonstrable through practical examples of previous tasks / experiences. | E | I |
| 8 | Ability to work full time hours between AWL base and Staffordshire University Campus | E | I |
| 9 | Time and project management skills: ability to prioritise workload, set own objectives and deliver to an agreed plan. | E | I |
| 10 | Industrial / commercial experience in a relevant field | D | A/I |
| 11 | Hold or be working towards a PHD in an engineering or appropriate relevant discipline. | D | A |

| *<u>Key</u> | |
|---|---|
| **[A] Application form** | **To be assessed against the information provided in the relevant steps of the application form and the evidence required under Section 4, 'Supporting Statements'** |
| **[I] Interview** | **To be assessed during the interview process including selection tests or presentation, as appropriate** |