University of St Andrews

Estates

Graduate Building Energy Management Systems (BEMS) Engineer - SB1161

Further Particulars for Applicants

THE ESTATE

The University plays a leading role in the quality of the built environment and is expanding. Many of the buildings enjoy listed status and contribute to the unique qualities and characteristics of St Andrews and North-East Fife. At present, the University owns some 138 academic, administrative, and residential buildings. The gross floor area of the academic and administration stock is circa 108,000 m² and the residential stock comprises circa 93,000 m².

ESTATES

Estates is a key support unit providing a range of functional activities to help the University achieve its corporate objectives. The unit is responsible for the implementation of decisions related to the buildings and fabric of the University and is also responsible for advising the University on strategic estates issues as well as it statutory obligations. The comprehensive service provided includes:

- Estate Strategy
- Professional and Technical Services
- Project and Buildings Management
- Janitorial, Security, Cleaning and Mail Services
- Environmental and Energy Management

The unit currently employs around 180 members of staff and is committed to providing a customer-orientated service to the university community through professional, technical and facilities services.

The University is committed to sustainable development practices and reducing our carbon footprint and we have a robust Carbon Management Plan in place to help meet this challenge. The University aims to be carbon neutral for energy by 2016 and the BEMS role is a significant part of that aim. The University is also developing a biomass energy centre and a 12MW wind farm. The University operates the largest (£2.6M) energy efficiency investment (SALIX) fund in the UK HE sector. The fund enables the institution to invest in energy saving practices.

In terms of specific building energy management systems, the University has Seimens Visonik, Siemens Desigo, Andover Continuum and Satchwell BAS 2800 building energy management systems covering most of the estate. The system comprises outstations controlling heating, ventilating and air-conditioning plant in 44 buildings and is regularly being extended to other areas as part of our development plan strategy.

The job description for this role is attached below.

Job Description

Job Title: Building Energy Management Systems (BEMS) Graduate Engineer School/Unit: Estates Reporting to: Energy Officer Job Family: Managerial, Specialist & Administrative	Working Hours: Full time/36.25 hours per week Grade/Salary Range: Grade 5, £25,013-£29,837 per annum Reference No: SB1161 Start Date: By agreement

Main Purpose of Role

The Building Energy Management Systems (BEMS) Graduate Engineer will be required to co-ordinate and ultimately manage the operation, maintenance and upgrading of the University's BEMS. As a graduate with a buildings services, control systems, I.T. and/or M&E engineering background and with excellent I.T. and computing literacy, you will be working with the Energy Officer, supported by other Estates professionals including the Mechanical and Electrical Services Engineers, and Heating and Electrical Engineers. You will be trained to operate the BEMS in order to provide agreed comfort conditions in the most energy-efficient way while keeping maintenance requirements as low as practicable, and coordinate the system maintainance. You will be tasked with optimising the BEMS so that the systems deliver the University's objectives for effective building functionality, energy reduction and achieving energy cost savings. The role is aimed at a graduate with anengineering, controls, science or computing qualifications. All relevant training and personal development support will be provided.

You will:

- Co-ordinate the day to day BEMS operation and optimisation of the various BEMS systems. Facilitate and manage repairs, maintenance work and maintenance programmes of the systems.
- Investigate operation of the systems with the aim of achieving increased energy efficiency of plant and equipment, identify energy saving strategies, monitor and report on effectiveness of changes made to the University's overall energy consumption figures in an advisory capacity.
- Assist in ensuring that any new or modified building energy management systems for new buildings and/or refurbishments are designed and commissioned effectively.

The position offers an excellent opportunity to assist with the development, implementation and monitoring of controls, plant and equipment to enable the delivery of customer-focused maintenance and energy saving programmes throughout the University. The post holder will be expected to develop their skills and it is anticipated that there is room for personal development within the Estates Team.

Key Duties and Responsibilities

1. Co-ordinate the operation of the BEMS on a daily basis, liaising with in-house maintenance staff to respond to alarms, identify, diagnose and resolve faults and operating problems.
2. Monitor and regulate the settings and status of the BEMS to ensure the optimum operation of critical services throughout the estate. Initiate appropriate prioritised alarms so as to instigate an Estates response that minimises disruption to building users.
3. Co-ordinate the delivery of routine maintenance of the BEMS in accordance with Siemens and Andover specifications. This will include administration of maintenance contracts, supervision

and direction of contractors in order to ensure reliable and cost effective operation in conjunction with colleagues.

4. Ensure the operation of the BEMS with particular reference to energy efficiency and seeking to identify energy saving strategies. Manage the implementation, monitoring and reporting on effectiveness of changes made.
5. Carry out inspections of existing BEMS installations, update records and working drawings, prepare reports and briefs for upgrading or modification where needed. Assist in the development of reports with costs in relation to proposed strategy changes which require capital investment.
6. Liaise with Estates staff in an advisory capacity to maintain a stock of replacement parts and source further items as needed including raising purchase orders using the facilities management computer system (CAFM).
7. Liaise with building occupants to understand their needs and issues for comfort heating and cooling, balancing these requirements with the need for energy cost savings and reductions in environmental emissions.
8. Ensure robust system development of the BEMS to add value to its operation. For instance, develop remote access pages to enable authorised users to view system status and to operate BEMS modifications within agreed access control limits.
9. Liaise and co-ordinate effectively with key stakeholders in schools/units, external bodies (eg contractors, suppliers) to ensure appropriate service levels are achieved. Keep and maintain accurate operational functionality records and prepare regular progress reports to demonstrate the impact of BEMS control on building and carbon efficiency.
10. Liaise with the Mechanical Services Engineer and Electrical Services Engineer to oversee, witness and ensure contract compliance of BEMS installation works undertaken by main contractors or subcontractors within major projects.
11. Co-ordinate training in the use of the BEMS and manage access and passwords as needed.
12. Assist with the maintenance aspects of the University's data reporting obligations and develop an appropriate database of measurable KPI's. This includes budgetary and management information.
13. Maintain an up to date working knowledge of building energy management and control systems including undertaking training and personal development as required.
14. Undertake evening/weekend work as reasonably required and carry out such other relevant duties as may be assigned from time to time.
15. Facilitate compliance with all heath and safety requirements of the University.

Please note that this job description is not exhaustive, and the role holder may be required to undertake other relevant duties commensurate with the grading of the post. Activities may be subject to amendment over time as the role develops and/or priorities and requirements evolve.

Person Specification

This section details the attributes e.g. skills, knowledge/qualifications and competencies which are required in order to undertake the full remit of this post.

Attributes	**Essential**	**Desirable**	**Means of Assessment**(i.e. application form, interview, test, presentation etc)
Education & Qualifications (*technical, professional, academic qualifications and training required)*	Relevant engineering, or computing qualification, degree or equivalent. (This may include HND/HNC engineering, buildings and relevant science-related qualifications if the applicant can demonstrate a robust track record of further experience that supplements their qualifications).	Buildings-related mechanical engineering and controls coursework. Applicant should be highly proficient in I.T., ideally with experience of computing with software engineering.	Application form, interview, copy of qualification certificate.
Experience & Knowledge (*examples of specific experience and knowledge sought*)	Knowledge of systems controls and the understanding of Building Energy Management Systems. Effective I.T. skills.	Experience of the use, implementation ,management and maintenance of the 'controls' side of Building Energy Management Systems. Familiarity with Siemens and Andover BEMS	Application form record of experience and roles.
Competencies & Skills (*e.g. effective communication skills, initiative, flexibility, leadership etc*)	Excellent interpersonal and communication skills. Leadership qualities and ability to share learning with Estates and other University staff. A professional and thorough approach at all times.		Interview
Other Attributes/Abilities	Ability to challenge existing processes and ideas and develop new ones where appropriate.	Evidence of an enquiring mind, willingness to learn, and enjoyment of problem solving.	

Essential Criteria – requirements without which a candidate would not be able to undertake the full remit of the role. Applicants who have not clearly demonstrated in their application that they possess the essential requirements will normally be rejected at the short listing stage.

Desirable Criteria – requirements which would be useful for the candidate to hold. When short listing, these criteria will be considered when more than one applicant meets the essential requirements.

Other Information

We encourage applicants to apply online, https://www.vacancies.st-andrews.ac.uk/welcome.aspx, however if you are unable to do this, please call +44 (0)1334 462571 for a paper application form. Those who previously applied for BEMS related job advertisements will not be considered eligible for interview.

For all applications, please quote ref: SB1161

The University is committed to equality of opportunity.

The University of St Andrews is a charity registered in Scotland (No SC013532).

Obligations as an Employee

You have a duty to carry out your work in a safe manner in order not to endanger yourself or anyone else by your acts or omissions.

You are required to comply with the University health and safety policy as it relates to your work activities, and to take appropriate action in case of an emergency.

You are responsible for applying the University's equality and diversity policies and principles in your own area of responsibility and in your general conduct.

You have a responsibility to promote high levels of customer care within your own area of work/activities.

You should be adaptable to change, and be willing to acquire new skills and knowledge as applicable to the needs of the role.

You may, with reasonable notice, be required to work within other Schools/Units within the University of St Andrews.

You have the responsibility to engage with the University's commitment to Environmental Sustainability in order to reduce its waste, energy consumption and carbon footprint.

The University & Town

Founded in the early 15th century, St Andrews is Scotland's first university and the third oldest in the English speaking world.

Situated on the east coast of Scotland and framed by countryside, beaches and cliffs, the town of St Andrews was once the centre of the nation's political and religious life.

Today it is known around the world as the 'Home of Golf' and a vibrant academic town with a distinctively cosmopolitan feel where students and university staff account for more than 30% of the local population.

The University of St Andrews is a diverse and international community of over 9000, comprising students and staff of over 100 nationalities. It has 7,500 students, 6,000 of them undergraduates, and employs approximately 2,460 staff - made up of c. 1,150 in the academic job families and c 1,310 in the non-academic job families.

St Andrews has approximately 50,000 living graduates, among them Scottish First Minister Alex Salmond and the novelist Fay Weldon. In the last 90 years, the University has conferred around 1000 honorary degrees; notable recipients include Bob Dylan, Benjamin Franklin, The Dalai Lama, Dame Judi Dench and Jack Nicklaus and Hillary Clinton.

The University is one of Europe's most research intensive seats of learning. It is the top rated University in Scotland for teaching quality and student satisfaction and among the top rated in the UK for research. The 2008 Research Assessment Exercise judged 94% of the University's research activity as internationally recognised with over 60% world leading or internationally excellent.

St Andrews is consistently held to be one of the United Kingdom's top ten universities in university league tables compiled by The Times, The Sunday Times, The Guardian and The Independent Complete University Guide. It has seven times been named the top multi-faculty university in the UK in the National Student Survey. The 2013 Times Higher Education World Rankings and the QS World University rankings place the University in the top 100 overall, in the top 50 for Arts and Humanities and in the top 20 for international outlook. St Andrews was named as Scottish University of the Year 2014 in The Times and The Sunday Times Good University Guide 2014.

Its international reputation for delivering high quality teaching and research and student satisfaction make it one of the most sought after destinations for prospective students from the UK, Europe and overseas. In 2012 the University received on average 12 applications per place. St Andrews has highly challenging academic entry requirements to attract only the most academically potent students in the Arts, Sciences, Medicine and Divinity.

The University is closely integrated with the town. The Main Library, many academic Schools and Service Units are located centrally, while the growth in research-active sciences and medicine has been accommodated at the North Haugh on the western edge of St Andrews.

As part of its 600th anniversary celebrations, launched by graduate Prince William, Duke of Cambridge, in 2011 and running to 2013, the University is pursuing a varied programme of capital investment, including the refurbishment of its Main Library and a major investment in its collections, the opening of a research library, a new biomolecular research facility, the refurbishment of the Students' Union, and the development of a wind-farm and green energy centre to offset energy costs.