**Job Related Information**

This document includes information about the role for which you are applying and the information you will need to provide with your application.

1. **Role Details**

<table>
<thead>
<tr>
<th>Vacancy reference</th>
<th>14869</th>
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<tbody>
<tr>
<td>Job title:</td>
<td>Software and Systems Developer</td>
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<tr>
<td>Reports to:</td>
<td>Science Web &amp; Interactive Media Manager</td>
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<tr>
<td>Salary:</td>
<td>£32,548 to £38,833</td>
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<tr>
<td>Terms and conditions:</td>
<td>Academic Related</td>
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<tr>
<td>Grade:</td>
<td>7</td>
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<tr>
<td>Duration of post:</td>
<td>Permanent</td>
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<tr>
<td>Working hours:</td>
<td>Full Time</td>
</tr>
<tr>
<td>Location:</td>
<td>Milton Keynes</td>
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<tr>
<td>Closing date:</td>
<td>Noon on 15th August 2018</td>
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<tr>
<td>Type of application form accepted:</td>
<td>Long</td>
</tr>
<tr>
<td>Number of referees required:</td>
<td>Three</td>
</tr>
<tr>
<td>Unit recruitment contact:</td>
<td>Rekha Ramesh</td>
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</tbody>
</table>
2. Summary of duties

The post holder will work as part of the Open University’s Science Web and Interactive Media (SWIM) team to carry out software development on a variety of teaching related projects with emphasis on remote operation of practical experimental apparatus for the award-winning OpenSTEM Labs (https://ounews.co/science-mct/openstem-labs-wins-outstanding-digital-innovation-of-the-year-award/).

Responsible for the whole project life-cycle, the post holder will scope, develop and implement a variety of interactive practical science activities to be used by Open University students. The successful candidate will play a key role in the development of software systems enabling the remote operation of experimental apparatus and hardware through the use of commercial software products and bespoke software solutions. The successful candidate will also work on a variety of other software assets that underpin our engaging practical STEM curriculum.

Working alongside the SWIM and OpenSTEM Labs teams, Faculty of STEM academics, Open University IT and external parties, the successful candidate will have a great opportunity to contribute to the Open University’s world leading STEM learning technologies and to expand and build on existing skillsets.

Specification, design and planning

- Advise academic and project staff on software solutions that address specified learning and technical objectives
- Play a leading role in the identification of the software components required to enable the remote operation of experimental apparatus
- Select and specify the software components and processes needed to design, create and integrate the required software solutions
- Produce specifications to meet agreed schedules
- Contribute to the identification of existing resources that could be reused and/or re-versioned.

Production, integration and validation of planned products

- Create software applications to form the interface between Virtual Learning Environments (VLEs) and a variety of remotely operated experimental apparatus, utilising your existing programming experience and/or cultivating new skills to get move projects through to completion.
- Create ‘stand-alone’ interactive media software applications to be hosted within a VLE
- Generate documentation that includes version control, backup and archive measures, such that production or maintenance activities could be undertaken by other staff if required
- Use designated tools, development environments and support systems in accordance with organisational procedures
- Demonstrate an organised but flexible approach to work, prioritising tasks, ensuring that production schedules are adhered to, reporting accurately on project progress, anticipating potential issues where possible and advising on timescales/resources for completion
- Liaise with external companies and contractors with regard to the production and maintenance of software solutions for specialist experimental apparatus.

Roll out and verification

- Ensure that the software components match the agreed designs and required functionality
- Deliver work that is fit for purpose and adheres to appropriate procedures and policies
- Support integration and system testing by preparing test data and completing test runs
- Create documentation which conforms to requirements and standards including the maintenance of all source code related software development
- Ensure that all technical deliverables of projects have gone through appropriate quality assurance and quality control processes
- Contribute to a rollout and handover plan
• Undertaken or participate in reviews of software
• Ensure that developed assets meet legal requirements (e.g. data protection, copyright, libel, plagiarism, accessibility).

Supporting functions
• Maintain an awareness of wider developments in the delivery of online practical STEM activities and the remote operation of experimental apparatus
• Share knowledge and expertise with colleagues to contribute to best practice
• Investigate and resolve technical queries and issues relating to produced applications that are in use by students
• Supporting other multi-media production activities within the OpenSTEM Labs and SWIM Teams.
• Undertake other appropriate activities as specified by appropriate project management staff.

All staff are expected to:
• Take reasonable care of the Health and Safety of themselves and that of any other person who may be affected by their acts or omissions at work.
• Co-operate with the Open University in ensuring as far as is necessary, that Statutory Requirements, Codes of Practice, University Policies and Departmental Health and Safety arrangements are complied with.
• Show a strong commitment to the principles and practice of equality and diversity.
• Participate in appropriate training and development activities including completion of the annual appraisal review.

3. Person specification

Requirements

Education, qualifications and training
• Degree-level (or relevant equivalent experience)

Knowledge, work and other relevant experience

Essential:
• Experience of education or employment in a STEM environment
• Relevant experience in the effective specification, design, development, production or integration of software solutions and systems
• Proven ability in full stack software application development using HTML5/JavaScript and Node.js.
• Knowledge of developing software that runs on different target devices (e.g. Desktop PC, Tablet)
• Ability to produce test specifications
• Ability to advise project management teams on software solutions for innovative projects
• Appreciation of the role of different media to support learning and teaching.

Desirable:
• Experience of developing software applications that interface with third-party data-streams
• Ability to develop software applications that interface with hardware
Experience of developing software applications that interface with geographical and mapping systems
Experience of robotic astronomical observatory systems
Experience of developing software that interfaces with LabVIEW environments
Experience of open source web development frameworks such as Drupal
A record of developing software applications to work within Virtual Learning Environments such as Moodle
Experience of developing virtual or augmented reality applications

Personal abilities and qualities

Essential:
- Effective communication skills, specifically the ability to liaise with academic, technical and administrative staff and also external companies and contractors
- A proven ability to research potential solutions to problems that a project can encounter
- A ‘self-starter’ – the ability to pro-actively assess a project situation and take relevant action but use good judgment to refer as necessary
- A proven ability to work well within a team environment and independently
- Well organised, flexible and able to prioritise own workload
- Ability to be accurate and pay close attention to detail
- Ability to cope with a range of priorities and work well under pressure
- Commitment to delivering excellent service
- Willingness to attain new skills through training.

4. Role specific requirements e.g. Shift working
n/a

5. About the unit/department

Faculty of Science, Technology, Engineering & Mathematics
The Faculty of Science, Technology, Engineering and Mathematics (STEM) is comprised:
- School of Computing & Communications
- School of Environment, Earth & Ecosystem Sciences
- School of Engineering & Innovation
- School of Life, Health & Chemical Sciences
- School of Mathematics & Statistics
- School of Physical Sciences
- Knowledge Media Institute
- Deanery including teams supporting Curriculum, Research and Enterprise, Laboratory Infrastructure and Faculty Administration

“We aspire to be world leaders in inclusive, innovative and high impact STEM teaching and research, equipping learners, employers and society with the capabilities to meet tomorrow’s challenges”
The Faculty of STEM consists of 700 staff and 1,800 Associate Lecturers. The Faculty delivers over 185 modules across undergraduate and postgraduate curriculum, supporting nearly 19,000 students (full time equivalents) which is 29% of the OU total.

The Faculty generates more research income (circa £17M) than any other Faculty in the University, supported by a comprehensive laboratory infrastructure.

We are proud of our distinctive values and capabilities underpinning our aspiration:

**We are inclusive:**
- We transform people’s lives, ensuring STEM education is openly accessible to many thousands of students from diverse backgrounds – our students express high satisfaction with their study experience
- We engage the public in exciting citizen science and engineering, including through free open educational resources, multi-platform broadcasting, outreach to inspire the next generation and with programmes to encourage more women into STEM

**We are highly innovative:**
- We are at the forefront of innovative developments in teaching practical science and engineering at a distance, through simulated and remote access laboratories and practical experimentation
- Our high quality teaching and curriculum are informed by world-leading research, strong links with professional bodies and communities of practitioners, as well as by scholarship focused on continuously improving our STEM pedagogy

**We deliver significant social and economic impact:**
- We provide STEM higher education at a scale and reach unsurpassed in the UK, with a sizeable international reach and further growth potential
- We inject transferable STEM skills and knowledge direct into the workplace for immediate employee and employer benefit, as students combine study while working
- The employability value of our courses is underpinned by accreditation from leading STEM Professional Bodies and Learned Societies, as well as partnerships and sponsorship with leading employers
- Our high quality, applied and academically relevant teaching and research addresses real-world issues, delivering impact for industry and society, including addressing pressing STEM skill shortages across the UK

**The Deanery**
The Deanery is the administrative hub of the Faculty and comprises of four teams:

- Curriculum Support
- Faculty Administration
- Laboratory Support
- Research & Enterprise Support

Comprising of the Executive Dean, Associate Deans, administrative and support staff, the Deanery manages the Faculty’s curriculum planning, module production and presentation; Laboratory infrastructure; specialist IT support; finances; human resources; and cross Faculty management of the research & enterprise activities.

6. **How to obtain more information about the role or application process**

If you would like to discuss the particulars of this role before making an application please contact Brian Richardson on +44 (0)1908858305 or email: brian.richardson@open.ac.uk

If you have any questions regarding the application process please contact Rekha Ramesh on +44 (0)1908659037 or email: STEM.Recruitment@open.ac.uk
7. The application process and where to send completed applications

Your application should contain:

(a) A completed long application form which details precisely how you match our requirements and the person specification and what you can bring to this post. This will form an important part of the selection process as well as helping us to assess your effective communication skills in writing.

(b) A letter of up to 500 words briefly describing why you are applying for this post.

NB: It is important that candidates complete all sections of the application form in full.

Please ensure that your application reaches the University by:

Noon on 15th August 2018

E-mail your application to: STEM-Recruitment@open.ac.uk

Or post it to Name/Job title: Rekha Ramesh, Staffing Adviser

Department/Unit: Deanery, Faculty of Science, Technology, Engineering & Mathematics

Address: The Open University, Walton Hall, Milton Keynes, MK7 6AA

8. Selection process and date of interview

The interview panel will be chaired by:

Derek Sheills, Head of Curriculum Delivery

The other members of the interview panel will include:

Professor Nick Braithwaite, Associate Dean (Academic Excellence)

Brian Richardson, Science Web and Interactive Media Manager

Another member to be confirmed

The interviews will take place on:

To be confirmed

The selection process for this post will include:

A short practical activity

We will let you know as soon as possible after the closing date whether you have been shortlisted for interview. Further details on the selection process will also be sent to shortlisted candidates.

Applications received after the closing date will not be accepted.