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>14494</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job title:</td>
<td>Software and Systems Developer</td>
</tr>
<tr>
<td>Reports to:</td>
<td>C&amp;C Institute of Coding Lead</td>
</tr>
<tr>
<td>Salary:</td>
<td>£32,548 - £38,833</td>
</tr>
<tr>
<td>Terms and conditions:</td>
<td>Academic Related</td>
</tr>
<tr>
<td>Grade</td>
<td>7</td>
</tr>
<tr>
<td>Duration of post:</td>
<td>Fixed-term 2 years</td>
</tr>
<tr>
<td>Working hours:</td>
<td>Full Time</td>
</tr>
<tr>
<td>Location:</td>
<td>Milton Keynes</td>
</tr>
<tr>
<td>Closing date:</td>
<td>Noon, Thursday 29 March 2018</td>
</tr>
<tr>
<td>Type of application form accepted:</td>
<td>Short version (with CV and Covering letter)</td>
</tr>
<tr>
<td>Number of referees required:</td>
<td>Three</td>
</tr>
<tr>
<td>Unit recruitment contact:</td>
<td>Mary Dahunsi</td>
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</tbody>
</table>
2. Summary of duties

The post holder will be a member of the Open University team, comprising academics and technology specialists in cyber security, data science, learning analytics and distributed ledger technologies, who are leading the “University Learners” theme of the Institute of Coding (IoC - [www.instituteofcoding.org](http://www.instituteofcoding.org)). The Institute is a unique and innovative collaboration led by University of Bath, Aston University, Coventry University, and Queen Mary University of London, that is supported by £20m from the Higher Education Funding Council for England and match funding from universities and industry partners. This is a hugely exciting new venture to try to address the digital skills gap: equipping learners of all disciplines to fulfil their potential in the digital economy and meet employment needs. This post will be key part of the development and of the OU’s contributions to this initiative.

Responsible for the whole project life-cycle, the post holder will scope, develop and implement a variety of interactive practical computing activities, relating to learning data science, programming and cyber security concepts 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 programming and computing infrastructure environments 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 computing curriculum, and integrate this into the award-winning OpenSTEM Labs ([https://ounews.co/science-mct/openstem-labs-wins-outstanding-digital-innovation-of-the-year-award/](https://ounews.co/science-mct/openstem-labs-wins-outstanding-digital-innovation-of-the-year-award/)).

Working alongside the Computing & Communications 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.

Specification, design and planning

- Advise academics 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 engagement with practical activities for learning data science, programming and cyber security.
- 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 online computing learning activities.
- 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 learning tools and environments.

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 OU procedures and policies
- Support integration and system testing by preparing test data and completing test runs
- Create documentation which conforms to OU 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
- Help 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 learning tools for data science, programming and cyber security.
- 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 Institute of Coding team.
- 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 (E = Essential/ D = Desirable)

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 to develop software applications in HTML5/Javascript
- Ability to develop software applications that interface with hardware
- Knowledge of developing software that runs on different target devices (e.g. Desktop PC, Tablets)
- 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
• Experience of developing software applications that interface with online learning tools for data science, programming and cyber security.
• 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

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
• The 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.

Desirable:

4. Role specific requirements e.g. Shift working

5. About the unit/department

Faculty of Science, Technology, Engineering & Mathematics
The newly formed Faculty of Science, Technology, Engineering and Mathematics (STEM) comprises:
• 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 more than 20,000 students (full time equivalents) which is 29% of the OU total.

The Faculty generates more research income (circa £20M) 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

School of Computing and Communications
The School of Computing and Communications has around 80 academic and research staff, and is also home for a number of visiting researchers and both full-time and part-time research students. Our main research interests lie in the areas of security/privacy, software engineering, communication technology, human-computer interaction, ubiquitous computing, computer science education, technology enhanced learning, computational linguistics, the history of technology, and critical information studies. Our objectives are to:

a. Transform students’ lives through innovative and dynamic teaching enriched by world-class research and scholarship.

b. Develop graduates with technical, analytical and creative skills who meet the highest expectations of employers and who can make a difference in their workplaces.

c. Lead and shape the digital revolution through people-centred, interdisciplinary, collaborative research and scholarship that transforms society.

d. Look outwards to engage with individuals and external bodies, sharing our knowledge and developing mutually beneficial partnerships, so together we can create a more technically and socially aware digital society.
e. Be a vibrant, agile and inclusive academic community that promotes academic excellence in all areas of teaching, research and external engagement.

We teach a comprehensive range of undergraduate and postgraduate qualifications. We have approximately 11,000 students registered for our undergraduate BSc degree. An example of our innovative teaching is the 'Introduction to Cyber Security' MOOC (http://bit.ly/1pMMKhk), hosted on Futurelearn, which has been studied by over 40,000 learners worldwide.

We aim for, and achieve, international excellence in research and teaching, leading on many projects including smart cities development. The OU’s Computing research performed strongly in the Research Excellence Framework (REF 2014) assessment, with 75% of outputs rated world-leading or internationally-excellent (up from 70% in 2008), and an excellent research environment (100% rated world-leading or internationally-excellent).

The School’s research is:

- Empowering: placing people at the centre
- Situated: focusing as much on context as on technology
- Disruptive: creatively disrupting discipline borders to give fresh perspectives and solutions

In other words, we focus on the use of technology to enhance human experience.

Our strong sense of collegiality and community continues to shape and direct the interdisciplinary approaches used throughout our work. The School of Computing and Communications holds the Athena SWAN Bronze Award and is committed to promoting gender equality.

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 Derek Sheills on +44 (0)1908652534 or email: Derek.Sheills@open.ac.uk.

If you have any questions regarding the application process please contact Mary Dahunsi on +44 (0)1908659573 or email: STEM.Recruitment@open.ac.uk

7. The application process and where to send completed applications

<table>
<thead>
<tr>
<th>Your application should contain:</th>
<th>Your application should include:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noon, Thursday 29 March 2018</td>
<td>a) A completed short application form</td>
</tr>
<tr>
<td>E-mail your application to:</td>
<td>b) Covering letter detailing 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 communication skills in writing.</td>
</tr>
<tr>
<td>Or post it to Name/Job title:</td>
<td>c) An up-to-date CV</td>
</tr>
<tr>
<td><a href="mailto:STEM-Recruitment@open.ac.uk">STEM-Recruitment@open.ac.uk</a></td>
<td></td>
</tr>
<tr>
<td>Mary Dahunsi, Staffing Adviser</td>
<td></td>
</tr>
</tbody>
</table>
### 8. Selection process and date of interview

<table>
<thead>
<tr>
<th>The interview panel will be chaired by:</th>
<th>Arosha Bandara, Head of School C&amp;C</th>
</tr>
</thead>
</table>
| The other members of the interview panel will include: | Karen Kear, Deputy Head of School C&C  
Michel Wermelinger, C&C Institute of Coding Lead  
Tony Hirst, Senior Lecturer in Computing  
+ 1 other, to be confirmed |
| The interviews will take place on: | To be confirmed |
| The selection process for this post will include | To be confirmed |

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.