

<b>Post Title:</b>	Senior Software Engineer
<b>Grade:</b>	7

## **Job Description**

### **2.1. Purpose**

The Senior Software Engineer will develop and support application products and services deployed on behalf of the University Group.

The Senior Software Engineer is responsible for the design, creation, testing and documenting of new and amended application products. This will be in accordance with agreed development and security standards and processes.

The post holder will have a proven understanding of technology and technology trends within the field of software engineering. They will apply this insight to enable the business to innovate through the use of technology.

### **2.2. Main Duties and Responsibilities**

1. Takes technical responsibility across all stages and iterations of software development. Adopts and adapts appropriate software development methods, tools and techniques. Measures and monitors applications of project/team standards for software construction including software security. Contributes to the development of University Group policies, standards, and guidelines for software development.
2. Undertakes information gathering and requirements analysis. Use this to produce solution designs (including cost and time estimates); to develop and implement solutions; to ensure that unit tests are developed and maintained.
3. Designs software components and modules using appropriate modelling techniques following agreed software design standards, patterns and methodology. Creates and communicates multiple design views to identify and balance the concerns of all stakeholders of the software design. Identifies and evaluates alternative design options and trade-offs. Recommends designs which take into account target environment, performance, security requirements and existing systems. Leads reviews of others' designs.
4. Provides and maintains technical documentation for new and existing solutions as a resource for colleagues within IT Services.

5. Actively maintains proven knowledge in software engineering and application development. Provides definitive advice in these areas. Supports and promotes the development and sharing of software engineering knowledge within the University Group.
6. Investigates corporate data requirements, and applies data analysis, design, modelling, and quality assurance techniques. Uses them to establish, modify or maintain data structures and their associated components (entity descriptions, relationship descriptions, attribute definitions). Provides advice and guidance to database designers and others using the data structures and associated components.
7. Develops and maintains specialist knowledge of database and data warehouse concepts, design principles, architectures, software and facilities. Assesses proposed changes to object/data structures, in order to evaluate alternative options. Implements physical database designs to support transactional data requirements for performance and availability. Implements data warehouse designs that support demands for business intelligence and data analytics.
8. Determines the approaches to be used to design and prototype application user interfaces. Ensures these are in line with the usability and accessibility requirements of the system, product or service. Uses iterative approaches to rapidly incorporate user feedback into designs. Plans and drives user experience design activities providing expert advice and guidance to support adoption of agreed approaches. Integrates required visual design and branding into the user experience design activities.
9. Manages aspects of the product lifecycle enabling application products to meet the needs of customers/users and achieve financial or other targets. Acts as product owner for one or more lower-value application products or services; prioritises product requirements and owns a product backlog. Analyses market and/or user research, feedback, expert opinion and usage data to understand needs and opportunities.

Deputises for the Software Engineering Team Leader as required.

**AND** such other duties as are within the scope of the spirit of the job purpose, the title of the post and its grading.

### **2.3. Supervision Received**

Line management is from the Software Engineering Team Leader.

### **2.4. Supervision Given**

None.

### **2.5. Contacts**

- IT Services staff, including Executive Team.

- Staff and students in other Schools / Support Areas of the University Group.
- External Suppliers and other education institutions.

### 3. Person Specification

ATTRIBUTES	ESSENTIAL	ADVANTAGEOUS
<b><i>Education &amp; Qualifications</i></b>	<ul style="list-style-type: none"> <li>• Educated to degree level in a relevant discipline with a professional qualification or substantial experience in related field in lieu of the above.</li> </ul>	<ul style="list-style-type: none"> <li>• Postgraduate or professional qualification in a relevant discipline, or chartered member.</li> <li>• MCSD (App Builder).</li> <li>• OCM (Java SE Developer).</li> <li>• ITIL.</li> <li>• CISSP.</li> </ul>
<b><i>Knowledge &amp; Experience</i></b>	<ul style="list-style-type: none"> <li>• Experience of software engineering.</li> <li>• Experience in data driven web developments using C#; ASP.NET; MVC; Webforms.</li> <li>• Experience in PL/SQL; T/SQL; SQL; HTML; CSS; JavaScript; AJAX.</li> <li>• Experience in SharePoint solution development.</li> <li>• Experience of Requirements gathering.</li> <li>• Understanding of OOP.</li> </ul>	<ul style="list-style-type: none"> <li>• Higher Education experience.</li> <li>• Oracle database development in a commercial application.</li> <li>• Writing scalable, globally distributed applications.</li> <li>• Working in a SCRUM environment.</li> <li>• Managing small project teams.</li> <li>• Experience in the use of VB6.</li> </ul>
<b><i>Job-related Skills, Abilities &amp; Competencies</i></b>	<ul style="list-style-type: none"> <li>• Proven analytical, planning and execution skills.</li> <li>• Proven leadership and management skills with the ability to develop, communicate and inspire staff.</li> <li>• Takes accountability and has strong sense of ownership.</li> <li>• Results oriented and a commitment to a high quality customer service</li> <li>• Ability to build and maintain broad network of business relationships.</li> <li>• Knowledge of customer behaviours, needs and expectations.</li> <li>• Ability to lead a team/discipline to quickly resolve complex problems in the provision of IT services.</li> <li>• Good understanding of current and emerging technologies and how other enterprises are employing</li> </ul>	<ul style="list-style-type: none"> <li>• Public cloud infrastructure.</li> <li>• Microsoft Azure.</li> <li>• Amazon Web Services.</li> </ul>

	<p>them to drive digital business support.</p> <ul style="list-style-type: none"> <li>• Software engineering principles and concepts.</li> <li>• Software engineering ecosystems.</li> <li>• Cyber-security within application technologies.</li> </ul>	
<b><i>Interpersonal Skills</i></b>	<ul style="list-style-type: none"> <li>• Able to influence and negotiate at appropriate levels and also where resources may not be in direct control of this role.</li> <li>• Proven communication, and presentation skills.</li> <li>• Ability to forge effective relationships in a complex matrix management environment.</li> <li>• Results oriented, adaptive and decisive.</li> <li>• Ability to build trust and display integrity.</li> <li>• Ability to work collaboratively and be a key team player.</li> <li>• Creative and innovative thinking.</li> <li>• Can resolve conflicts and problems.</li> </ul>	
<b><i>Other Requirements</i></b>	<ul style="list-style-type: none"> <li>• A flexible approach to working hours and location, including a willingness to travel, locally, nationally or overseas, as required.</li> <li>• An appreciation of other cultures; the global reach of the University Group and its international agenda.</li> <li>• Ability to work flexibly and extended hours by agreement to meet tight, fixed deadlines or as required by service imperatives.</li> </ul>	