1. **Job details**

   **Job title:** Specialised Services officer (X-Ray fluorescence and X-Ray Diffraction)

   **School:** GeoSciences

   **Line manager:** Analytical Services Manager

2. **Job purpose**

   As part of the School’s Analytical services team, provide internationally recognised X-Ray fluorescence and X-Ray Diffraction (XRF, XRD) services to meet the teaching and research activities of the School.

3. **Main responsibilities**

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<th>Approx % of time</th>
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<td><strong>1.</strong> Responsible for the operation and development of the School's X-Ray fluorescence and X-Ray Diffraction facilities. To provide an internationally-recognised high quality service using XRF and XRD techniques for undergraduates, postgraduates academic and research staff, for other GeoSciences School facilities that require this service, and for other Schools and external bodies. To develop existing and new techniques on both instruments to meet the present and future needs of the School and to contribute to research publications using XRF and XRD analysis.</td>
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<td><strong>2.</strong> To maintain both XRF and XRD facilities to ensure they are fit for purpose. To ensure that all equipment is fully maintained and compliant with the present Health and Safety regulations. To liaise with the School’s Health and Safety adviser to ensure equipment and practice meet all relevant requirements.</td>
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<td><strong>3.</strong> To provide training and advice to postgraduate students, academic and research staff on the sample preparation and operation of both instruments. To advise external clients and receive and prepare samples for analysis.</td>
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<td><strong>4.</strong> Responsible for the budget allocation for the XRF and XRD facilities and for re-couping expenditure using the School charging system.</td>
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<td><strong>5.</strong> To order and maintain supplies of, monitor and record usage of materials required for operation of the XRF and XRD facilities.</td>
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<td><strong>6.</strong> Carry out any other reasonable duties and undertake professional development or training as requested by line manager.</td>
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4. **Planning and organising**

   - Plan and prioritise own work schedule to meet the requirements of teaching and research demands so as to deliver the required level of service to any deadlines. (e.g. forward planning for the running of samples for undergraduate dissertation data versus research demands).
   - Plan and organise annual and ad-hoc servicing, maintenance and repair of the instruments and associated equipment and other material resources. (e.g. organising planned shut-downs of instruments so as not to affect scheduled activities).

5. **Problem solving**

   - Resolve day-to-day operational difficulties in instrument and equipment performance using scientific/technical know-how and experience. (e.g. investigating if the problem is with the sample or the instrument)
• Solving technique problems for academic, research staff and postgraduate students. (e.g. when results are not what was expected).

6. Decision making
• Take independent action to remedy problems that would have an adverse effect on immediate teaching and research activities (e.g. deciding when any of the instruments require to be shutdown due to calibration problems giving poor performance).
• Deciding when it is absolutely necessary to call in service engineer after instrument failure. (e.g. decide when do not have the necessary specialised equipment to remedy problem and need to call in service engineer).

7. Key contacts and relationships
• Advise the Analytical Services Manager on issues relating to short-and long-term service provision and planning for both instruments.
• Discuss and review techniques, analytical problems encountered and significance or interpretation of results with academic and research staff and students and with external users.
• Discuss details of function and problems with service engineers for relevant instruments.
• Advise, train and supervise staff or students in appropriate use of equipment and techniques.

8. Knowledge, skills and experience needed
• Education to degree level or equivalent in a relevant discipline.
• Familiarity with the equipment, techniques and specimens in use, either through a relevant formal qualification or through equivalent experience.
• 3 years’ experience in a technical or other support role.
• Experience of contributing to research publications.
• Good communication, interpersonal and time management skills.

9. Dimensions
• Provide support for c. 26 members of staff and 50 students per annum
• Work across 2 buildings
• Approx £400k of technical and scientific equipment.
• Supporting a School of c. 230 staff and 1200 students.

10. Job context and any other relevant information
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