

Job Description

Geospatial Technician (Engineering Services) Faculty of Science, Agriculture & Engineering

Main Purpose

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To provide field-based and classroom-based technical support to geospatial research and teaching activities in Geographic Information Systems (GIS), Remote Sensing (RS; particularly ground-based radar, unmanned aerial vehicle sensor systems, and terrestrial laser scanning) and other forms of geospatial surveying.

To support the research and teaching activities of the School of Engineering, Engineering Services through the provision of technical expertise. To supervise technical staff in the area as designated by the School Technical Manager under the direction of the Technical Team Leader.

Main Duties and Responsibilities

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1. In conjunction with the technical team leader for the activity, be responsible for the day-to-day operation of specific facilities or items of equipment. To undertake fault diagnosis, testing, repair, calibration and preventative maintenance on instrumentation under the roles responsibility.
2. To be responsible for the disposal of hazardous materials according to standard University procedures. Ensure compliance with relevant safety procedures including relevant risk assessments. In conjunction with the Team Leader and School Safety Officer monitor compliance with all statutory and local safety arrangements.
3. To train and advise staff and research students in appropriate techniques and good practice to ensure that they are able to carry out their work in a safe manner. To provide supervision and training for postgraduate and undergraduate students and occasionally, for other technical staff using the facilities to ensure safe working practices are followed.
4. In conjunction with the Academic, Research, other technical staff students as appropriate, identify consumable and equipment requirements and initiate their ordering according to the School and University purchasing procedures. Keep financial records of any activities as directed by the technical team leader. To undertake general duties for the issuing, specifying and control of stock items and tools, whilst assisting to maintain adequate stock levels for use.
5. To contribute to regular team meetings, health and safety meetings and workshop and/or laboratory audits.



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6. To provide classroom-based support (planning, preparation, and independent delivery) for undergraduate, postgraduate and professional practical teaching in GIS, RS, and other forms of geospatial surveying.
7. To lead practical and computer classes in geospatial engineering science (including GIS, RS, and surveying), and provide individual (face-to-face and online) student support in these technologies. To develop new practical and computer lab material for this teaching at all levels, and to have general responsibility for maintaining related handheld equipment including GNSS.
8. To deliver and supervise, in conjunction with other staff, undergraduate residential field courses and field/project work in GIS, RS, and other forms of geospatial surveying.
9. To be responsible for maintenance of field equipment and software for ground-based radar remote sensing (real and synthetic aperture (SAR); GB-SAR), and support its use in teaching, research and engagement activities.
10. To be responsible for maintenance of field equipment and software for unmanned aerial vehicle (UAV) remote sensing, and support its use in teaching, research and engagement activities, including piloting. To be responsible for compliance with legal requirements for UAV operation and maintenance.
11. To be responsible for maintenance of field equipment and software for terrestrial laser scanning (TLS) and other forms of ground-based geospatial surveying including GNSS, and support its use in teaching, research and engagement activities.
12. To maintain and expand personal knowledge and skills in GIS, RS, and other forms of geospatial surveying, including the state of the art in equipment, software, and other technology, to ensure that the School remains at the forefront of these fields.
13. Any other duties within the scope and general nature of the grade which may be required



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Person Specification

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	Qualifications	Essential or Desirable
1	Bachelor's degree or equivalent level qualification in GIS, remote sensing, surveying/geomatics or a related field (e.g. civil engineering, electrical/electronic engineering, computing science, physics, physical geography, Earth sciences). Alternatively, candidates may possess significant vocational experience, demonstrating development through progressively more demanding, relevant roles.	Essential
2	Advanced working knowledge of GIS and remote sensing techniques, and other forms of geospatial surveying.	Essential
	Knowledge, Skills and Experience	
1	Broad knowledge of application fields utilising GIS and/or remote sensing, within engineering or the Earth and environmental sciences.	Essential
2	First Aid at Work qualification. Training will be provided if required.	Desirable
3	Excellent oral and written communication skills. Numeracy and basic statistics. IT skills including data/file management and use of common office software. Advanced operational skills in GIS and image processing software. Capability to acquire advanced technical skills in GIS, and the maintenance and operation of ground-based radar, UAV remote sensing platforms and sensors, laser scanners, and ground-based surveying equipment including GNSS.	Essential
4	Coding skills in Python or a similar high-level computer language. Operational skills in the ESRI suite of GIS software and the ERDAS Imagine image processing software. Development of web technologies including web servers, Apache, Linux & Javascript. Technical skills in the operation of ground-based radar, UAV remote sensing platforms and sensors (including piloting), and laser scanners. Operational skills with post-processing software for ground-based radar and laser scanner data. Operational skills with other specialist geospatial/geomatics apparatus e.g. satellite positioning and field survey tools. Practical maintenance and fault-finding skills with electronic and field equipment.	Desirable



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5	Work experience and/or Further/Higher Education study involving GIS or remote sensing. Experience of working independently and also in team environments. Must include fieldwork experience.	Essential
6	Experience of web based GIS systems and web based development platforms e.g. Geoserver, Openlayers.	Desirable
7	Experience in the delivery or support of university-based teaching at undergraduate, postgraduate or professional level. Work experience in a university research or industrial research and development context.	Desirable
8	Driving licence valid in UK for vehicle categories C1 (goods vehicles up to 7500 kg) and D1 (minibuses up to 16 passengers). Training will be provided if required. Fork lift truck driving qualification. Training will be provided if required.	Desirable
Behaviours / Success Factors		
1	Team-working (Self) <ul style="list-style-type: none"> • Works collaboratively with others, plays a positive role in teams and establishes and grows relationships across the organisation where different skills, expertise and opinions are valued. • Shares relevant and useful information with others • Respects the expertise and contribution of others even if own opinion is different • Willing to help others and share workloads 	
2	Planning and organising (Self) <ul style="list-style-type: none"> • Works in a planned and structured way • Ensures that all activities are completed on time • Ensures that others know how processes and systems work • Set own priorities in conjunction with team and area objectives 	
3	Finding Solutions <ul style="list-style-type: none"> • Looks at ways of overcoming obstacles rather than coming to a standstill • Keeps an open mind to alternative ways of doing things 	
4	Delivering services (Self) <ul style="list-style-type: none"> • Keeps fellow team members up to date with progress • Pays attention to detail • Has a positive attitude for doing things better • Takes responsibility for achieving own targets • Co-operates with others to achieve targets • Strives to deliver high quality results • Is enthusiastic in getting job done on time 	



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5	Embracing change (Self) <ul style="list-style-type: none">Recognises the need for change and is forward looking. Promotes the benefits of change to others and regularly comes up with new ideas. Has the willingness to adopt new ways of working and to make improvements.	
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HR Office Use Only	
SAP Position Number:	
Grade:	E
Effective Date:	20/02/2019

