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| **Post Details** | | **Last Updated:** 06/05/222 | | | | | |
| **Faculty/Administrative/Service Department** | Faculty of Engineering and Physical Sciences  Centre for Environment and Sustainability | | | | | | |
| **Job Title** | Experimental Officer – Model testsing | | | | | | |
| **Job Family** | Technical and Experimental | | **Job Level** | 4 | | | |
| **Responsible to** | Project Lead | | | | | | |
| **Responsible for (Staff)** | n/a | | | | | | |
| **Job Purpose Statement**  The post holder will play a fundamental role in the successful delivery of the project investigating novel offshore foundation types in the Surrey Advanced Geotechnical Engineering Laboratory.  The Experimental Officer will be responsible for coordinating the experimental testing, numerical modelling and data analysis of the physical models to be tested in the laboratory and to deliver reports to successfully deliver a report to the client.  These activities will be done always complying with the relevant health and safety guidelines. | | | | | | | |
| **Key Responsibilities** This document is not designed to be a list of all tasks undertaken but an outline record of the main responsibilities (5 to 8 maximum) | | | | | | | |
| 1. To design physical models according to the experimental criteria and foundation type. 2. To conduct numerical models on Plaxis of the proposed foundation. 3. To interpret and report information in written form (technical and non-technical) to project members for internal and external audiences. 4. To perform data signal analysis on the transducers used in the experimental test. 5. To coordinate activities with the SAGE Experimental Office regarding use of spaces in the laboratory. 6. To create, implement and assess excel spreadsheets for load calculation. 7. To ensure experimental setup is safe to use.   ***N.B. The above list is not exhaustive.*** | | | | | | | |
| All staff are expected to:  * Positively support equality of opportunity and equity of treatment to colleagues and students in accordance with the University of Surrey Equal Opportunities Policy. * Work to achieve the aims of our Environmental Policy and promote awareness to colleagues and students. * Follow University/departmental policies and working practices in ensuring that no breaches of information security result from their actions. * Ensure they are aware of and abide by all relevant University Regulations and Policies relevant to the role. * Undertake such other duties within the scope of the post as may be requested by your Manager. * Work supportively with colleagues, operating in a collegiate manner at all times.   **Help maintain a safe working environment by:**   * Attending training in Health and Safety requirements as necessary, both on appointment and as changes in duties and techniques demand. * Following local codes of safe working practices and the University of Surrey Health and Safety Policy. | | | | | | | |
| **Elements of the Role**  This section outlines some of the key elements of the role, which allow this role to be evaluated within the University’s structure. It provides an overview of what is expected from the post holder in the day-to-day operation of the role. | | | | | | | |
| **Planning and Organising**   * The post holder will work without close line management supervision but will operate under direction and guidance from the Academic Lead for Geotechnics. * They will have the freedom to work in a proactive manner and will decide how to achieve the result, generally based on their judgement, prior experience, and technical expertise, within agreed priorities in a dynamic environment. | | | | | | | |
| **Problem Solving and Decision Making**   * During the day-to-day activities, the post holder is expected to apply knowledge of design of offshore foundation and typical loading condition of offshore environments in the design of the physical models. * The post holder is required to provide troubleshooting with regards to any PLAXIS models they may face. This includes the use of the software, the adequate selection of the model parameters and loading conditions as well as the identification of the critical components of the model. * Errors in judgement or failure to carry out a particular task could result in delays of critical steps on the delivery of the reports. | | | | | | | |
| **Continuous Improvement**   * The post holder is expected to contribute to the development of techniques and methods for agreed research Programmes and laboratory related initiatives in the SAGE laboratory. | | | | | | | |
| **Accountability**   * Ensure their own wellbeing, as well as that of staff they are responsible for, through compliance with standard procedures, including those governing Health and Safety. * The post holder is expected to respond confidently and in a timely manner to problems/issues such as equipment malfunctions and breakdowns. They are expected to apply well established processes and procedure along with technical knowledge to troubleshoot and overcome these problems. | | | | | | | |
| **Dimensions of the role**   * This is a fixed term position, and the outcomes of the research are expected to be delivered by the end of this term. Post holder should be skilled in PLAXIS modelling and time management. * The post holder is expected to contribute to the ongoing research taking place in the SAGE laboratory and be aware of the ongoing research in the offshore industry. | | | | | | | |
| **Supplementary Information**   * A thorough knowledge of offshore foundation design is necessary to successfully deliver the goals of the project. | | | | | | | |
| **Person Specification** This section describes the sum total of knowledge, experience & competence required by the post holder that is necessary for standard acceptable performance in carrying out this role. | | | | | | | |
| **Qualifications and Professional Memberships** | | | | |  | | |
| Degree, HND, NVQ 4 qualified or equivalent standard in the relevant specialist area plus some relevant work experience.  OR  Broad practical work experience in a relevant technical or scientific role. | | | | | E | | |
| Postgraduate qualification (Masters or PhD) in relevant specialist area, e.g. Civl Engineering focused in offshore foundation design. | | | |  | **E** | | |
| **Technical Competencies (Experience and Knowledge)** This section contains the level of competency required to carry out the role (please refer to the Competency Framework for clarification where needed and the Job Matching Guidance) | | | | **Essential/ Desirable** | **Level**  **1-3** | | |
| Solid relevant technical knowledge & experience soil mechanics and design of offshore foundation types (gravity-based foundations, monopiles, suction caisson etc). | | | | E | 3 | | |
| Experience in signal processing and data analysis of transducers. | | | | E | 3 | | |
| Confident in foundation design and use of software such as PAXIS | | | | E | 2 | | |
| Experience in the delivery of industry projects using PLAXIS | | | | E | 2 | | |
| Experience in physical model test of offshore foundations | | | | E | n/a | | |
| **Special Requirements:** | | | | | **Essential/ Desirable** | | |
| Willingness to respond to out of hours calls if required in case of alarms or an emergency | | | | | | E | |
| Ability to work outside of regular office hours on occasions | | | | | | | E |
| Physically active and able to move and lift heavy objects | | | | | | | E |
| **Core Competencies** This section contains the level of competency required to carry out this role. (Please refer to the competency framework for clarification where needed). n/a (not applicable) should be placed, where the competency is not a requirement of the grade. | | | | | **Level**  **1-3** | | |
| Communication  Adaptability / Flexibility  Customer/Client service and support  Planning and Organising  Continuous Improvement  Problem Solving and Decision Making Skills  Managing and Developing Performance  Creative and Analytical Thinking  Influencing, Persuasion and Negotiation Skills  Strategic Thinking & Leadership | | | | | 3  3  2  3  3  3  2  3  1  1 | | |
| This Job Purpose reflects the core activities of the post. As the Department/Faculty and the post holder develop, there will inevitably be some changes to the duties for which the post is responsible, and possibly to the emphasis of the post itself. The University expects that the post holder will recognise this and will adopt a flexible approach to work. This could include undertaking relevant training where necessary.  Should significant changes to the Job Purpose become necessary, the post holder will be consulted and the changes reflected in a revised Job Purpose. | | | | | | | |
| **Organisational/Departmental Information & Key Relationships** | | | | | | | |
| Background Information  The Faculty of Engineering and Physical Sciences is built on the core engineering disciplines of Civil Engineering Aeronautical Engineering, Chemical Engineering, Electronic Engineering and Mechanical Engineering, together with the core scientific disciplines of Computing, Mathematics Physics and Chemistry. Within these fields we enjoy a reputation for excellence in research and teaching. The SAGE Laboratory also enjoy a reputation of excellent in the delivery o consultancy project as well as research and teaching. We are committed to develop novel techniques, methods, and research to contribute to the innovation on the offshore industry. | | | | | | | |
| Department Structure Chart | | | | | | | |
| Relationships **Internal**   * Laboratory Technicians * Experimental Officer of SAGE laboratory * Project Staff including * University research, teaching and PGR staff * Close liaison with University Health & safety department to ensure best practice is adhered to   **External**   * External bodies and industry. * External contractors and service engineers. | | | | | | | |