



Job title	Senior Drives Maintenance Engineer	Job family and level	Technical Services 4
School/ Department	DER (Driving the Electrical Revolution) Industrialisation Centre - Nottingham	Location	Power Electronics Machines Centre, University Park Campus

Purpose of role

The Senior Drives Maintenance Engineer role is to support the drives test facility, DER Industrialisation Centre and Powered Electronics Machine Control research group. The role holder will ensure timescales and deliverables are met in accordance with the universities health and safety policies.

This will involve the setup, operation and maintenance of bespoke test stands including research and industrial units under test, which can include multiphase motors/generators, powered electronic components and manufacturing machines in the test facility laboratories.

	Main responsibilities (Primary accountabilities and responsibilities expected to fulfil the role)	% time per year
1	<p>Calibration & Maintenance</p> <ul style="list-style-type: none"> ▪ Carry out the calibration, maintenance and servicing schedules for test equipment and rigs associated with the facility. ▪ To setup, program and operate test stands and equipment for maintenance cycles and pretest setup and check. ▪ Maintain good housekeeping of all workshops and laboratories associated with the Centre activities. 	55%
2	<p>Bespoke motor and generator setup and testing</p> <ul style="list-style-type: none"> ▪ To program and operate bespoke test stands during testing campaigns to customer or agreed requirement, ensuring safe operation at all times and working within agreed parameters. ▪ Electrical and mechanical setup of the test stands for campaigns and other when required including: <ul style="list-style-type: none"> ▪ Electrical harnessing low voltage and high voltage up to 3.3kV ▪ Connection of cooling systems and other mechanical ancillaries ▪ Operation, connection and control of the laboratories high power network and equipment. ▪ Mechanical alignment of motor/generators using laser or manual alignment tooling. ▪ Installation of a wide range of electrical and electronic systems including low and high voltage AC/DC at high power levels, all 	20%

	<p>complying with relevant standards. This will entail pricing and purchasing of appropriate components.</p> <ul style="list-style-type: none"> ▪ Use of specialised equipment in the prototype testing and monitoring of motor/generators and reporting findings to the Chief Engineer. ▪ Working with industrial customers, PEMC academics and researchers to assess designs and offer advice on alternative engineering solutions to achieve the campaign objectives. ▪ Act as the high voltage laboratory authorised person and carry out high voltage switching, and management of the laboratory as required by the universities HV policy. ▪ Support Senior Manufacturing Engineer in machine manufacturing for the DER industrialisation Centre 	
3	<p>Software and automation</p> <ul style="list-style-type: none"> ▪ Use of a variety of test stand operation packages and to help interpret outputs based on customer specification. ▪ Use of a variety of measurement and data capture platforms in the capture and interpretation of data from testing campaigns. ▪ Use of CAD or similar packages to ascertain customer requirement, aid in design and setup of test stand and respond to customer queries. ▪ Support automation of test processes to minimise human intervention and maximise efficiency and repeatability of delivery 	10%
4	<p>Health & Safety</p> <ul style="list-style-type: none"> ▪ Activities to support the adherence to Health and Safety policies of the University and relevant standards, procedures and codes of practice. 	10%
5	<p>Other</p> <ul style="list-style-type: none"> ▪ Any other duties appropriate to the role and grade of the post holder. 	5%

Person specification

	Essential	Desirable
Skills	<ul style="list-style-type: none"> ▪ Motivated, self-directed and independent. ▪ Ability to communicate clearly to specialist and senior level audiences. ▪ Good computing skills 	<ul style="list-style-type: none"> ▪ Competent in both single and three phase installations.
Knowledge and experience	<ul style="list-style-type: none"> ▪ Good understanding of the requirements around motor and generator maintenance ▪ Work with electrical machines and electrical drives. ▪ Experience of test stand operation and setup ▪ The interpretation and implementation of work related regulations and procedures and an understanding of noncompliance. ▪ Strong understanding of calibration, maintenance and maintenance requirements. ▪ Good understanding of electrical theory. ▪ Electrical knowledge of motors and motor controllers. ▪ Knowledge of electronics and electronic systems. 	<ul style="list-style-type: none"> ▪ Experience working with high power machines and electronic device assemblies. ▪ Working within a research environment in the field of motor and generator testing. ▪ Experience in system and equipment maintenance ▪ Use of software packages such as AutoCAD/Autodesk. ▪ Coil winding experience ▪ Work with CNC machines or work with within an engineering or manufacturing environment ▪ Experience with risk analysis specific to motor/generators testing e.g., electrical hazards, fire, rotating parts.
Qualifications, certification and training (relevant to role)	<ul style="list-style-type: none"> ▪ HNC in relevant subject or equivalent or substantial experience in a relevant role. ▪ Apprenticeship/Qualified technician with experience in a relevant role or qualifications with substantial work experience in a relevant role. 	<ul style="list-style-type: none"> ▪ HND, degree or other higher-level engineering qualification. ▪ Inspection, Calibration and Testing Certification. ▪ Maintenance qualifications. ▪ Quality control qualifications
Statutory, legal or special requirements		<ul style="list-style-type: none"> ▪ Ability to travel.



The University of Nottingham is focused on embedding equality, diversity and inclusion in all that we do. As part of this, we welcome a diverse population to join our work force and therefore encourage applicants from all communities, particularly those with protected characteristics under the Equality Act 2010.

Expectations and behaviours

The University has developed a clear set of core expectations and behaviours that our people should be demonstrating in their work, and as ambassadors of the University's strategy, vision and values. The following are essential to the role:

- Valuing people** Is always equitable and fair and works with integrity. Proactively looks for ways to develop the team and is comfortable providing clarity by explaining the rationale behind decisions.
- Taking ownership** Is highly self-aware, looking for ways to improve, both taking on board and offering constructive feedback. Inspires others to take accountability for their own areas.
- Forward thinking** Driven to question the status quo and explore new ideas, supporting the team to "lead the way" in terms of know-how and learning.
- Professional pride** Sets the bar high with quality systems and control measures in place. Demands high standards of others identifying and addressing any gaps to enhance the overall performance.
- Always inclusive** Ensures accessibility to the wider community, actively encouraging inclusion and seeking to involve others. Ensures others always consider the wider context when sharing information making full use of networks and connections.

Key relationships with others

