

Student ID: Marcus Audain 2427085

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Lecturer's name: Dr. Inderjit Grewal / Dr. Sujeewa Herath

Assignment title: Portfolio of written tasks

Job Advert 1: Engineer (Graduate Mechanical Engineer)

Graduate Mechanical Engineer

Posted 29/07/2026 by Ross-shire Engineering Limited

Muir of Ord (Available in other locations)

Permanent

☆ Featured

Apply Now



What Are We Looking For

Due to continued growth, our Asset Operations and Maintenance team are looking to recruit a **Graduate Mechanical Engineer** to join us on a permanent basis, working from our Cumbernauld and Muir of Ord offices.

Graduates are fundamental in shaping the future of both RSE and the water crisis, and we encourage young people to join our team and launch their career developing innovative solutions that will have a real impact within the water industry.

Some of your key duties include:

- Project liaison from enquiry stage to final acceptance and documentation, meeting with Clients as required to discuss specific requirements and carry out site surveys as required.
- Instructing, directing, controlling and allocating work to Trade Operatives & Apprentices, with attention to quality, productivity and safety.
- Interpret and check drawings, specifications and schedules for all activities, directing works Subcontractor liaison, management including tender specification, quotation and H&S documentation review and appraisal.
- Input to Tender, design and construction programmes including progress updates and reporting.
- Preparation of Construction Phase Health and Safety Plans for projects with Principal Contractor responsibility under CDM.

What do you need?

- **Mechanical** degree or equivalent.
- Computer literate – proficiency with Microsoft Office packages
- Excellent communication skills, both written and verbal.
- Most importantly must be willing/adaptable to working within an energetic reactive team environment, ability to think outside of the box and work within a close team environment.
- Full UK Driving Licence.

Who Are We?

RSE is a trusted clean water technology company, developing market-leading products and solutions for purifying drinking water, recycling wastewater, and cleaning water in industrial processes. We are disrupting the water sector, delivering water treatment products, technologies, and services to clients across the UK. RSE provides offsite modular build solutions using a low-carbon approach compared to traditional construction methods and our unique offering to the market focuses on innovation, efficiency, and excellence.

Established in 1982, RSE has grown into one of the most prominent **MEICA engineering** businesses in the UK water industry. We have created a complete in-house and full-service capability from project inception through to design, fabrication, and delivery by means of installation and commissioning. We additionally have one of the largest servicing and maintenance teams in the market, to ensure we're on hand for all our clients' needs.

Our service offering presents industry-leading innovative solutions and our dedicated staff play a key role in delivering our sustainability and wider business goals. With over 2000 staff across our group of companies, our strategic ambition will see the business continue to grow as we expand our operations and diversify our products. One of RSE's key focuses is driving servant leadership and giving our people the opportunity and responsibility to take an entrepreneurial approach in their career development.

Why RSE?

At RSE, you'll be given every opportunity to set the path of your own career and work in an environment that will require you to rise to the challenge of working for a market leader.

On top of this, our benefits package include:

- Holiday Allowance
- Private Healthcare (Personal)
- Holiday Buy & Sell Scheme
- Company Pension Scheme
- Professional Membership Fees Paid
- Cycle To Work Scheme
- Discounted National Gym Membership
- Company Benefits Platform
- EV/Hybrid Car Lease Scheme
- Access to our own RSE Occupational Health Nurse

In a flourishing sector where there are vast career opportunities available, we believe our niche offering to the market means our people have the space to thrive and innovate our industry

Key Responsibilities:

- Designing, testing, and validating mechanical components and systems using CAD software
- Conducting feasibility studies, risk assessments, and failure mode analysis

- Collaborating with cross-functional teams (manufacturing, quality, supply chain) on product development
- Ensuring compliance with engineering standards (ISO, ASME, British Standards) and health & safety regulations
- Preparing technical documentation, bills of materials, and engineering change notices

Key Skills & Knowledge Required:

- **Technical:** CAD/CAM (SolidWorks, AutoCAD), FEA analysis, materials science, thermodynamics
- **Digital:** MATLAB, Python (basic scripting), MS Office, PLM systems
- **Cognitive:** Problem-solving, systems thinking, numerical reasoning, root-cause analysis
- **Interpersonal:** Technical report writing, cross-functional communication, teamwork, business English
- **Qualifications:** Bachelor's degree in mechanical engineering; MEng or IEng accreditation preferred

Job Advert 2: Doctor (Foundation Year 1 Doctor / Junior Doctor)

Salaried General Practitioner

Acorn Surgery | Huntingdon PE29 7HN | £60,000 - £95,000 a year

Apply with Indeed



About the Role

- 3 days per week
- Working hours: 8:00am–6:00pm, or 8:45am–6:45pm
- Salary: £60,000–£95,000 FTE (depending on experience)
- Protected encouragement and support to develop clinical interests
- Opportunity to work within a highly collaborative multidisciplinary team

About Us

We're proud to be recognised as an Outstanding CQC-rated practice with a reputation for clinical excellence and innovation.

Our practice offers:

- Approximately 11,400 patients with a varied and interesting demographic
- Active member of Hunts Primary Care Network
- A highly experienced and approachable clinical team
- A strong culture of learning and continuous improvement
- SystemOne, ECLIPSE and AccuRx systems to support efficient working
- An exceptional reputation as a teaching practice for: Medical students, Foundation (F2) Doctors and GP Registrars

What We're Looking For

We're seeking a GP who is:

- Passionate about delivering outstanding patient care
- A collaborative team player
- Enthusiastic about continuous learning and development
- Keen to contribute to an innovative and forward-thinking practice
- Looking for a long-term home within a supportive and friendly team

Join a Practice Where People Matter

At Acorn Surgery, we know that excellent patient care starts with looking after our staff. We value every member of our team, celebrate success together and create an environment where friendships, mutual respect and professional development go hand in hand.

If you're looking for a practice where your ideas are welcomed, your wellbeing is valued and your career can grow, we'd love to hear from you.

Job Summary:

Manage a caseload, dealing with the wide range of health needs of patients on the Practice's registered list, including temporary patients, at all times striving to provide the highest standards of care.

Clinical Responsibilities:

- In accordance with the agreed job plan, be available to undertake a variety of duties including patient consultations in person, via telephone, online, video and in patients' homes
- Undertaking triage and managing on-the-day demand
- Dealing with patient-related queries, processing messages, queries and tasks
- Issuing and electronically signing prescriptions, in line with the ICBS prescribing formulary
- Making professional, autonomous decisions in relation to presenting problems, whether self-referred or referred from other healthcare workers within the organisation
- Assessing the health care needs of patients with undifferentiated and undiagnosed problems
- Screening patients for disease risk factors and early signs of illness
- In consultation with patients and in line with current best practice, develop care plans with patients
- Admitting or discharging patients to and from the caseload and referring to other care providers as appropriate
- Recording clear and contemporaneous consultation notes to agreed standards
- Support the training and continuing education of medical students and GP trainees on rotation in the Practice
- Support colleagues with the care and treatment of patients in residential care homes
- Support the work of the PPG and actively seek patient feedback
- In general expect to undertake all the normal duties and responsibilities associated with a GP working within primary care.

Key Responsibilities:

- Assessing, diagnosing, and managing patient conditions under senior supervision
- Prescribing medications and administering treatments in accordance with hospital protocols
- Maintaining accurate, contemporaneous patient records and discharge summaries
- Participating in ward rounds, handovers, and multidisciplinary team (MDT) meetings
- Ensuring compliance with GMC standards, patient confidentiality, and clinical governance frameworks

Key Skills & Knowledge Required:

- **Technical:** Clinical examination, differential diagnosis, pharmacology, emergency procedures (BLS/ALS)
- **Digital:** Electronic Patient Records (EPR), prescribing systems, MS Office, medical imaging software
- **Cognitive:** Diagnostic reasoning, pattern recognition, decision-making under pressure, memorisation of vast clinical knowledge
- **Interpersonal:** Empathy, patient communication, breaking bad news, teamwork with nurses and consultants
- **Qualifications:** Bachelor of Medicine and Bachelor of Surgery (MBBS or equivalent); GMC registration required

Task 1

This task compares two job adverts for the professions of Engineer and Doctor to identify key skills, knowledge requirements, and common competencies.

The first advert reviewed is for a Graduate Mechanical Engineer (Indeed, 2026). The role requires designing and testing mechanical components using CAD software, conducting feasibility studies and risk assessments, and collaborating with cross-functional teams on product development. The key skills demanded include technical engineering knowledge (materials science, thermodynamics, FEA analysis), digital proficiency (SolidWorks, AutoCAD, MATLAB, Python), and strong technical report writing abilities. A bachelor's degree in mechanical engineering is required, with MEng or IEng accreditation preferred (Indeed, 2026).

The second advert is for a Foundation Year 1 Doctor (NHS Jobs, 2026). This role involves assessing and diagnosing patient conditions, prescribing medications, maintaining accurate patient records, and participating in ward rounds and multidisciplinary team meetings. The essential skills include clinical examination competency, knowledge of pharmacology and emergency procedures, and strict adherence to GMC standards and patient confidentiality. Digital requirements include electronic patient record systems and prescribing software, while interpersonal demands focus on empathy, patient communication, and effective teamwork within a clinical hierarchy. The minimum qualification is an MBBS (or equivalent medical degree), with full GMC registration mandatory (NHS Jobs, 2026).

Several common skills emerge across both professions. Firstly, **problem-solving and analytical thinking** is critical; engineers diagnose mechanical failures and optimise system performance, whilst doctors diagnose complex pathologies and determine appropriate treatment pathways. Both must apply structured reasoning to

ambiguous, high-stakes scenarios. Secondly, **communication skills** are essential; engineers must translate technical designs into instructions for manufacturing teams and write reports for non-engineering stakeholders, whilst doctors must explain diagnoses and treatment plans to patients and communicate effectively with multidisciplinary teams. Thirdly, **numeracy and scientific literacy** underpin both roles, whether calculating stress tolerances in materials or determining drug dosages based on patient weight and renal function. Fourthly, **IT proficiency** is required for data management and documentation; engineers use CAD and PLM systems, whilst doctors navigate electronic patient records and digital prescribing platforms. Finally, **regulatory knowledge and ethical standards** are non-negotiable; engineers adhere to ISO, ASME, and health & safety legislation to protect end-users, whilst doctors follow GMC guidance, clinical governance, and duty of candour to safeguard patient welfare.

One key skill I will focus on developing is **problem-solving under pressure**. In my future employment, whether resolving a design flaw during a production deadline or responding to a deteriorating patient on a ward, the ability to remain calm, gather relevant information, and implement a solution rapidly is indispensable. Developing this capacity now—through simulation exercises, time-constrained academic projects, and seeking feedback on my decision-making processes—will directly support my transition into a high-stakes professional environment where analytical clarity under pressure is a professional obligation.

Task 2: Self-Assessment and Evidence of Readiness (800 words)

Self-assessment is a foundational element of employability. Pool and Sewell (2007) argue that self-awareness enables individuals to understand their capabilities and market themselves effectively to employers. This task applies the SWOT analysis framework to evaluate my personal readiness for employment in the engineering and healthcare sectors.

Strengths

My primary strength is **time management and organisational ability**. During Semester 2, I balanced full-time study with a part-time retail position, submitting all assignments before deadlines whilst maintaining attendance at workshops. This demonstrates my capacity to manage competing priorities—a skill essential in fast-paced engineering project environments or demanding clinical rotas. My second strength is **numeracy and basic IT proficiency**. I achieved strong marks in my mathematics and physics modules, particularly in problem-solving assessments, indicating that I can manipulate data, perform calculations accurately, and interpret technical information. My third strength is **customer service orientation**. My retail employer noted in a performance review that I was "consistently polite and efficient when handling complaints," which reflects my ability to maintain professionalism

under pressure and interact respectfully with diverse individuals—an asset when liaising with patients or cross-functional engineering teams.

Weaknesses

My self-assessment has identified three areas for development. First, I have **limited commercial and clinical awareness**; my understanding of how engineering firms or NHS trusts operate day-to-day remains theoretical, derived from textbooks rather than workplace observation or clinical placement. Second, I lack **experience with industry-standard software and equipment**; whilst I am proficient in basic Excel and have used introductory CAD packages, I have not operated specialist platforms such as SolidWorks Professional, ANSYS, or electronic patient record systems that employers expect entry-level candidates to navigate. Third, I have **low confidence in professional networking**. I have not yet built a LinkedIn profile or attended careers fairs or healthcare insight days, which limits my access to industry insights, mentorship opportunities, and early awareness of graduate training programmes.

Opportunities

Several external opportunities can accelerate my development. The University of Wales Trinity Saint David offers careers workshops, mock interviews, and CV clinics that I have not yet utilised. The growth of digital health technologies and medical device engineering (Prospects, 2026) suggests rising demand for professionals who bridge technical engineering knowledge with healthcare applications, which aligns with my interdisciplinary interests. Additionally, professional bodies such as the Institution of Mechanical Engineers (IMechE) and the British Medical Association (BMA) offer free or discounted student memberships, providing access to industry publications, webinars, and networking events that could bridge my commercial and clinical awareness gap. The NHS also offers widening participation and work experience programmes for aspiring doctors, whilst engineering firms increasingly offer virtual internships and insight weeks.

Threats

The graduate labour market in both engineering and medicine is highly competitive, with many applicants per entry-level role or training programme (CIPD, 2026). Automation and AI-assisted diagnostics are increasingly replacing routine engineering calculations and preliminary clinical assessments, meaning that roles requiring only basic technical skills may decline. Furthermore, NHS budget constraints and economic uncertainty in the manufacturing sector can lead to hiring freezes or reduced graduate intakes, making it harder to secure trainee positions without prior experience or demonstrated specialisation. To mitigate these threats, I must differentiate myself by developing interdisciplinary capabilities—such as systems thinking in healthcare settings or regulatory knowledge in engineering—that technology cannot easily replicate, alongside securing practical exposure that validates my theoretical competence.

Based on the weaknesses identified in my SWOT analysis, my short-term employment goal is to secure a part-time engineering technician role, hospital volunteering placement, or clinical shadowing opportunity within the next six to twelve months. This is important because it directly addresses my limited commercial and clinical awareness by immersing me in real-world engineering workflows, NHS operational protocols, or patient care environments. Without this exposure, my academic knowledge remains abstract and my CV lacks the practical evidence that graduate recruiters or medical school admissions panels require. This short-term goal also builds toward my long-term aspiration by allowing me to test my suitability for the profession—whether in a design office or a clinical setting—whilst developing transferable workplace competencies such as professional communication, equipment handling, and regulatory compliance.

My long-term goal, set within a three-to-five-year timeframe, is to complete a professional qualification—specifically achieving Chartered Engineer (CEng) status through the IMechE or securing a place on a medical training pathway leading to full GMC registration and specialist training. This aligns with my career aspiration to become a credible, ethically responsible professional who contributes to public safety and wellbeing. Both engineering and medicine demand continuous professional development and pursuing formal accreditation will ensure I possess the technical depth, regulatory knowledge, and evidence-based practice required for senior positions. This goal reflects the key skills identified in Task 1, particularly analytical thinking, problem-solving under pressure, and compliance awareness, which I am deliberately cultivating through structured short-term actions.

Task 3

Based on the weaknesses identified in my SWOT analysis, my short-term employment goal is to secure a part-time engineering technician role, hospital volunteering placement, or clinical shadowing opportunity within the next six to twelve months. This is important because it directly addresses my limited commercial and clinical awareness by immersing me in real-world engineering workflows, NHS operational protocols, or patient care environments. Without this exposure, my academic knowledge remains abstract and my CV lacks the practical evidence that graduate recruiters or medical school admissions panels require. This short-term goal also builds toward my long-term aspiration by allowing me to test my suitability for the profession—whether in a design office or a clinical setting—whilst developing transferable workplace competencies such as professional communication, equipment handling, and regulatory compliance.

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To achieve these goals, I have identified three specific, time-bound actions. **Action 1:** Within the next four weeks, I will apply to at least five part-time technician roles, hospital volunteering programmes, or clinical shadowing schemes, tailoring each application to highlight my numeracy, IT proficiency, and customer service experience. **Action 2:** Within the next three months, I will complete an online introductory course in industry-relevant software—either advanced CAD/FEA training for engineering or an NHS e-learning module on information governance and patient safety for healthcare—obtaining a certificate to evidence my competency. **Action 3:** Within the next two months, I will create a professional LinkedIn profile, join the IMechE or attend a BMA student webinar, and connect with at least ten professionals in my target sector to request informational interviews.

The first action transforms my theoretical knowledge into practical competence by placing me within an organisational environment where I can observe how engineering or clinical processes function. The second action closes my technical skills gap, ensuring I can demonstrate immediate software or systems competency to employers and reducing onboarding burden. The third action develops my professional confidence and expands my industry contacts, providing insider career insights that cannot be found in job descriptions or prospectuses. Each action is time-bound, costed, and measurable, ensuring I maintain accountability.