

Position Title: GRADUATE ELECTRICAL ENGINEER

Report To: LEAD ENGINEER

1 PRIMARY FUNCTION

The Graduate Electrical Engineer is responsible for performing a range of electrical engineering functions, including analysis, investigations, design and documentation tasks under the direction of senior engineers.

The Graduate Engineer is expected to achieve competency in these activities through a combination of on-the-job instruction and self-motivated personal development, whilst also attending internal training sessions. The Graduate Engineer is expected to be able to work independently with a good level of competency within two to three years.

2 CORPORATE RESPONSIBILITIES

All staff are required to:

- Represent/Embrace the Company's Vision.
- Understand and communicate the full range of services offered by the Company.
- Assist in the positive promotion of the Company and its Values at all points of contact with Clients, Suppliers and the Community.
- Recognise the key Values of the Company and participate in building a positive team culture of high-quality staff.
- Act professionally and in accordance with the Company's Policies and Procedures at all times.

3 ACCOUNTABLE DUTIES

3.1 Technical

- Undertake a range of the following technical tasks to achieve the objectives of quality, schedule and budgeted man-hours, whilst under the supervision of a senior engineer:
 - Design of LV electrical power distribution systems such as switchboards, motor control centres, distribution boards, including selection of equipment selection, undertaking calculations and preparing documentation.
 - Undertaking computer-based calculations such as cable sizing, fault levels, protection discrimination and voltage drops.

- Design of automation and control systems, such as PLC, telemetry and SCADA systems, including selection of equipment, I/O calculations and relevant documentation.
 - Control system programming, configuration and troubleshooting.
 - Industrial lighting design and equipment selection.
 - Design of earthing systems and lightning protection systems.
 - Preparing detailed and accurate written reports, functional specifications and scopes of work.
- Accept responsibility for the accuracy, quality and timeliness of the above engineering functions.
- Liaise with Welcon's other Electrical Engineers to learn and gain full knowledge of relevant technical standards.
- Undertake relevant internal training to learn, apply and comply with the company's Quality Assurance systems and Engineering Procedures.
- Carry out site visits, initially with experienced Engineers, to liaise with clients, gather data, inspect construction or manufacturing progress or perform testing.
- Maintain and develop the company's client base by winning clients' satisfaction and trust during the performance of assigned projects.
- Develop technical skills through on-the-job training and by attending selected training courses and/or completing postgraduate studies.
- Direct subordinate personnel, such as drafters and designers, when assigned on a project-by-project basis.

3.2 Environmental, Health & Safety

- Identify Environmental, Health & Safety hazards when commencing any project tasks or activities. Apply relevant risk management and risk minimisations procedures relevant to the particular site and task.
- Actively participate in Environmental, Health & Safety (EH&S) systems as required and understand the concepts of Welcon's EH&S systems.
- Follow all Environmental, Health & Safety relevant procedures.

4 SKILLS REQUIREMENT

4.1 Technical

- Knowledge and experience in one or more of the following areas would be well received:
 - Low Voltage power systems.
 - Induction motor theory and operating characteristics.
 - PLC and SCADA control systems.
 - Basic knowledge of Australian Standards and Codes, especially:
 - AS3000
 - AS3008
- High level of computer literacy, including:
 - Proficient typing skills
 - Microsoft Word
 - Microsoft Excel
 - Microsoft Outlook (email & calendar functions)

4.2 Communication & Literacy

Individuals must be able to demonstrate the following:

- High quality English grammar, including spelling and sentence structure.
- Ability to verbally communicate clearly and efficiently with Clients and other team members, both face-to-face and using the telephone, **in high quality English**.
- Ability to read technical documentation, standards and client briefs and interpret implications and actions required for successful implementation.
- Ability to prepare, write and review well-structured technical reports, specifications, business correspondence, operating and maintenance manuals, as well as meeting minutes and general project documentation.

4.3 Reasoning & Analytical

Individuals must be able to demonstrate that they can:

- Solve practical problems and deal with a variety of concrete variables.
- Break a complex task into its components and assign their relevant priorities.
- Interpret a variety of instructions furnished in written, oral, diagram, or schedule form, when dealing with client requests and non-engineering personnel.
- Utilise all available research methods and resources available for technical support.

5 EXPERIENCE

Whilst it is not expected that a recently graduated Engineer will have significant work experience, any prior engineering or electrical experience (such as a trade qualification or certificate) will be well regarded.

6 QUALIFICATIONS & EDUCATION

To perform this job successfully, the individual must be able to perform each essential duty satisfactorily.

This requires a Degree in Electrical Engineering from a recognised Australian institution which is eligible for Graduate IEAust membership.

7 CERTIFICATES, LICENSES, REGISTRATIONS

The following are the minimum requirements:

- Standard Queensland Open-class Motor Vehicle License is a mandatory requirement for this position.

8 WORK ENVIRONMENT

- The position is based primarily in a professional office environment in Gladstone, Qld. However, the employee will be required to attend client sites in both commercial and industrial environments. This will include locations such as coalmines, smelters, chemical plants, power stations and refineries.
- The hazards in the work environment are usually moderate, although most industrial sites will require the use of Personal Protective Equipment, including safety helmets, safety boots, safety glasses, respirators and mono-goggles. While performing the site duties of this job, the employee is occasionally exposed to risk of electrical shock.
- Medical examinations may be required to ascertain suitability to work on some sites. In particular, lung function, physical fitness and audiometry tests may be required for some sites.
- Travel away from home for up to two weeks at a time will be expected.