

STEVE GARDNER

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ETCO - THE ELECTRICAL TRAINING EXPERTS

Qualified electricians are in high demand. Etco is NZ's leading provider of electrical apprenticeships and training, providing employment by placing apprentices with electrical companies and contractors through our group apprenticeship scheme. With over 30 years of experience, we have supported thousands of students in training. Trust The Electrical Training Experts.

THE ELECTRICAL PRE-TRADE FOUNDATION PROGRAMME / LEVEL 3

Take the first steps towards working in the electrical industry by studying for the Electrical Engineering Level 3 Theory with ETCO. Pre-Trade Foundation Programme students can apply for employment as an ETCO apprentice before their course finishes and will know before graduation whether they have been offered a position with ETCO. The programme includes:

- Basic knowledge and principles of electrical theory
- Basic knowledge of fault diagnosis and testing techniques
- Basic knowledge and principles for installation and maintenance of electrical machines and equipment
- Safe working procedures and practices
- Legal limitations of electrical legislation
- How to work ethically and professionally within the electrical industry

Students are taught electrical theory and some practical knowledge by registered electricians, during this course.

Delivery: Feb-Dec Full year course, three-days-a-week.

Locations: Whakatāne, Rotorua, Taupo, Tauranga, Tokoroa (dependent on sufficient numbers of students).

UNIT STD	ELECTRICAL PRE-TRADE FOUNDATION PROGRAMME	LEVEL	CREDITS
750	Demonstrate knowledge of electrical test instruments and take measurements		2
15847	Demonstrate knowledge of mathematics and mechanics for electrical trades		4
15848	Demonstrate and apply knowledge of safeguards for use with portable electrical appliances		3
15849	Perform manual soldering and de-soldering procedures for electrotechnology work		2
15852	Isolate and test low-voltage electrical subcircuits		2
15855	Demonstrate knowledge of circuit protection		3
25070	Explain the properties of conductors, insulators, and semiconductors and their effect on electrical circuits		7
25071	Demonstrate knowledge of electromotive force (e.m.f.) production		3
25072	Apply electromagnetic theory to a range of problems		5
29465	Apply knowledge of electrical safety and safe working practices for electrical workers		6
29466	Demonstrate knowledge of legislation and Standards governing electrical workers		2
29467	Demonstrate knowledge of the electrical industry ethical work practices		2
29468	Demonstrate and apply knowledge of safe plant isolation, re-commissioning, and associated electrical testing procedures		5
29469	Select and install flexible cords and cables		4
29470	Demonstrate knowledge of electric motor and generator construction and operation		2

29474	Demonstrate and apply knowledge of electrical fittings and components and their installation	6
30645	Demonstrate practical application of theory and legislation for electrical appliance service persons (endorsed)	3
1204	Demonstrate knowledge of earthing	2
6401	Provide first aid	1
6402	Provide basic life support	1
6705	Test electrical appliances for safety	3
15866	Demonstrate and apply knowledge of and the procedures for the examination of and testing of electrical installations	3
29471	Demonstrate knowledge of electric switchboards and lighting and power circuits	2
29473	Demonstrate knowledge of single-phase and three-phase transformers	3
29476	Demonstrate and apply knowledge of capacitance, inductance, power factor, and power factor correction	7
29477	Demonstrate knowledge of the New Zealand national electricity grid and associated electrical protection	2
29479	Draw and explain electrical diagrams	4
29480	Demonstrate knowledge of electric circuit design, control, and protection	6
29481	Apply knowledge of lighting installation, testing, repair, and disposal	5
29483	Demonstrate and apply knowledge of single-phase and three-phase rotating machines	4
29484	Demonstrate intermediate knowledge for working in electrical trades	1
29557	Apply fundamental techniques for identifying and locating faults in electrical fittings or systems	4
29749	Demonstrate and apply knowledge of theory and practice for registration of electrical workers (stage 1)	2
29753	Demonstrate and apply knowledge of theory and practice for registration of electrical workers (stage 2)	2
30657	Isolate low-voltage electrical subcircuits and perform basic checks and tests to confirm isolation	1
30658	Demonstrate knowledge of fundamental electrical safety in the workplace	2
31831	Apply knowledge of theory and legislation for electrical service technicians (EST)	4
CREDIT VALUE		3
		120

COURSES PATHWAY TO FURTHER STUDY IN:

Pre-Trade Foundation Program Graduates, Electrical Apprenticeship – NZ Certificate Electrical Engineering Level 4 Electrical Apprentices, Electrical Engineering Qualification.

TYPES OF EMPLOYMENT THESE COURSES LEAD TO:

Pre-Trade Foundation Program Graduates

Electrical Wholesaling, Retailing, Electrical Meter Reading, Electrical Appliance Service Technician, Electrical Service Technician.

Electrical Apprentices

Business Ownership, Electrical Estimator, Inspector, Project Manager, Automation, Robotics, Supervisor, Solar and Wind Energy, Marine, Teaching.

