-	UNIT	EQUIPMENT
	MACHINE UNITS	
	UEEEL0043 Develop engineering solutions for induction machine and control problems	Equipment ● d.c. machine ● ac machine ● Prime mover ● 1 x analogue voltmeter ● 2 x analogue ammeters ● ELV AC power supply ● DC Circuit breaker ● DC Contactor ● DC Power Supply ● Surge protection device Materials ● Variable load ● Field rheostat ● Switch ● Fuse ● Multimeter **Miscellaneous Items:** ● PPE ● Hand tools ● Connection leads
	ANALOG AND DIGITAL ELECTRONICS UNITS	
	UEEIC0042 Solve problems in single phase electronic power control circuits*	Equipment ● Digital Trainer Kit ● Digital Probe ● Electronic Trainer Kit ● d.c. power supply 10 V ● analogue voltmeter ● analogue ammeter ● fuse and switch

		• connection leads Materials • 4 mm^2 connecting leads • Multimeter **Miscellaneous Items:** • Colour pens/pencils & ruler
	ELECTRONIC CONTROL UNITS	
	UEEIC0042 Solve problems in single phase electronic power control circuits*	Equipment • Cathode oscilloscope • Variable Frequency Power Supply • Electronic Trainer Kit • IC Cards • Diode • Transistor • Silicon Control Rectifier • ICs • Resistors various bands • Capacitors various bands • DC Power Supply • AC DC Converters • DC DC Converter • LEDS • LED Drivers • Heat sinks • Soldering Iron • Breadboard • Solders • Signal lamps • DC Relays • Circuit simulator software Materials

		• 4 mm^2 connecting leads • Multimeter **Miscellaneous Items:** Colour pens/pencils & ruler

	POWER SUPPLY UNITS	
		Equipment • Diode Retifier • Capacitor • 240v to 12 v step down transformer • Filter • Zener diode • Voltage regulator card • Regulated power supply card • Variable DC Power supply • Circuit design instruction books Materials • 4 mm^2 connecting leads • Multimeter Materials • 4 mm^2 connecting leads • Multimeter **Miscellaneous Items:** • Colour pens/pencil • Ruler

	CIRCUIT ANALYSIS UNITS	
	UEECD0036 Provide engineering solutions for problems in complex multiple path circuits UEEEL0062 Provide engineering solutions to problems in complex polyphase power circuits	Equipment • Resistors various bands • Capacitors various bands • DC Power Supply • Variable frequency power supply • Inductors • Electronic circuit trainer • Breadboard Materials • 4 mm^2 connecting leads • Multimeter **Miscellaneous Items:** • Colour pens/pencil • Ruler
	ENGINEERING COMPUTER APPLICATION SOFTWARE UNITS*	
	UEECS0033 Use engineering applications software on personal computers	Equipment • CAD Software • Fusion 360 • Tinkercad • SketchUp • Electronic Symbol • Electrical CAD Materials • Pen / Pencil • Paper • Graph paper **Miscellaneous Items:** • Colour pens/pencil

		• Ruler
	ELECTRICAL APPARATUS UNITS	
		Equipment • Wiring booth • Distribution board • Selection of circuit breakers and RCDs • Selection of isolators and switches • Pendant socket-outlet • 5-pin socket-outlet • Downlight and ancillary equipment • Smoke detector • Digital multimeter • IR tester • Battery drill Materials • Selection of LV cables, including: TPI Flat TPS Circular TPS Flexible cable • Selection of wiring supports, including: Cable tray Conduit Catenary wire and supports • Fittings and fixings for cable tray and conduit • Snake • Cable ties • Cable glands **Miscellaneous Items:** • Hand tools • PPE

		• AS/NZS 3000 (current edition)

	MANAGEMENT UNITS	•
		• Computer and Internet • Writing equipment pencil , • paper , pen
	GENERTAL COMPUTER APPLICATION UNITS	
		Equipment • Computer (laptop, desktop or tablet). • Internet access. • External storage Materials • USB stick. • Pens/pencils. **Miscellaneous Items:** • Word processor. • Spreadsheet software. • Email account.
	INDUSTRIAL CONTROL SYSTEM UNITS	
	UEEIC0042 Solve problems in single phase electronic power control circuits*	Equipment • G Soft GEN NX Software • G Soft GEN NX PLC • Trilogy PLC Software • Scada Software • Distributor frames • Termination blocks • Modular sockets • 50 pair, 20 pair, 4 pair, 2 pair

		and jumper cables • Catenary system • Suitable earth cables • Hand tools and test equipment • PLC Trainer • Circuit simulator software Materials • AS/NZS 3000 (current edition) • AS/NZS 3008 Part 1.1 (current edition) • Local Service and Installation Rules (SIR) • Pens/Pencils • Ruler • Calculator • Manufacturer's catalogues – switchgear and controlgear • Screwdrivers • Krone tool • Battery drill • Cable strippers • Diagonal cutters • DMM • F set • Buttinski • Cable Wizard **Miscellaneous Items:** • Mounting blocks • Screws • Cable ties • Pens/pencils • AS/CA S009:2020 • AS/CA S008:2020
	MICROCONTROLLER UNITS	
		Equipment • 8085 Microcontroller trainer • Educational Robot Motor Kit

		• DSP Teaching Experimental Box Materials • 4 mm^2 connecting leads • Multimeter **Miscellaneous Items:** • Colour pens/pencil • Ruler

	MATERIALS MANAGEMENT UNITS	
	UEECD0004 Apply material science to solving electrotechnology engineering problems	Manufacturer catalogues Excel software to prepare the bills and quantity
	REPORT WRITING UNITS	
	UEECD0010 Compile and produce an energy sector detailed report	Computer and Internet Writing equipment pencil , paper , pen
	WHS POLICIES	
	UEECD0024 Implement and monitor energy sector WHS policies and procedures	Computer and Internet Writing equipment pencil , paper , pen
	COMPETENCY DEVELOPMENT UNITS	
	UEECD0003 Apply industry and community standards to engineering activities UEECD0056 Apply methods to maintain currency of industry developments UEECD0017 Establish and follow a competency development plan in an electrotechnology engineering discipline	Computer and Internet Writing equipment pencil , paper , pen
	PROJECT UNITS	
	UEECD0014 Develop design briefs for electrotechnology projects UEECD0026 Manage risk in electrotechnology activities UEECD0059 Write specifications for electrical engineering projects	Manufacturer catalogues Design drawings of various projects NSW Electrical Service rules AS3000 AS3008 Electrical Contracting textbook

	UEECO0003 Manage contract variations UEEEL0015 Manage large electrical projects UEEEL0058 Plan large electrical projects	Excel software to prepare the bills and quantity
	RENEWABLE ENERGY UNITS	
	UEERE0001 Apply environmentally and sustainable procedures in the energy sector UEERE0013 Develop strategies to address environmental and sustainability issues in the energy sector	RE Design System Books Equipment Setup photos System simulation software Solar system mini model Computer and Internet Writing equipment pencil , paper , pen
	ELECTRICAL POWER SYSTEM UNITS	
	UETDRIS033 Solve problems in network protection* Concurrently with UETDREL005Work safely in the vicinity of live electrical apparatus UETDRIS032Solve problems in network equipment UETDRIS027 Diagnose and resolve faults in transmission systems UETDRIS026 Concurrently with Diagnose and resolve faults in electrical apparatus	Power circuit testing system equipment setup photos Power system operation videos Power system protection videos Power line design programs Power system testing equipment procedures and photos Heavy power equipment setup photos/ simulation practical/Excel graphing programs sheets

The following units are theory units , the reference books are expressed in Learnin g resources section

UEECD0005 Apply physics to solving electrotechnology engineerng problems

UEECD0039 Provide solutions to basic engineering computational problems*

UEECD0049 Use advanced computational processes to provide solutions to energy sector engineering problems—This unit can be moved to Term

Electrical Diploma Practical

http://www.mongroupsydney1.com/Practical.zip

Electrical Diploma Practical Equipment

www.iqytechnicalcollege.com/Practical Equipments.pdf

PLC Equipment

PLC Hardware Notes 1

www.iqytechnicalcollege.com/PLC Hardware Notes 1.pdf

PLC Hardware Notes 2

www.iqytechnicalcollege.com/PLC Hardware Notes 2.pdf

PLC Hardware Notes 3

www.iqytechnicalcollege.com/PLC Hardware Notes 3.pdf

PLC Hardware Notes 4

www.iqytechnicalcollege.com/PLC Hardware Notes 4.pdf

PLC Hardware Notes 5

www.iqytechnicalcollege.com/PLC Hardware Notes 5.pdf

PLC Hardware Notes 6

www.iqytechnicalcollege.com/PLC Hardware Notes 6.pdf

Control Circuit Boards

www.iqytechnicalcollege.com/Control Circuit Boards.pdf

Process Control Equipment Setup 1

www.iqytechnicalcollege.com/Process Control Equipment Setup 1.pdf

Process Control Equipment Setup 2

www.iqytechnicalcollege.com/Process Control Equipment Setup 2.pdf