

UEE30820 Certificate III in Electro-technology-Electrician Online

www.iqytechnicalcollege.com/electricaltrade2022.htm

This online learning site is designed by

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CIII Electrical Wiring (TAFE-NSW), Cert of Proficiency(Electrical Fitter)NSW VTT, Craft Cert (Electronic Computer Systems)NSWVTT,

Cert of Proficiency (Engineering), NSWVTT,UEE11 Statement (TAFE-NSW)

Dip Electronics (ICS-USA)

Marine Engineer Cadet Training Certificate (Mechanical)

MIEAust (907788),

Professional Engineer (NSW) 001338

Registered Professional Engineer of Queensland (07661)

NSW Electrician Licence-Qualified Supervisor Certificate (33631S)

(Former Teacher of Electrical Engineering & Electrotechnology-TAFE-NSW)

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UK Qualifications

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- Incorporated Engineer (Engineering Council-UK)(1995)
- Stage 1 Charter Engineer (Engineering Council-UK)(1998)
- AMIEE (1996)
- MIET (2018)
- AMIMarE (1996)

UEE20 and UEE11 Mapping

www.highlightcomputer.com/UEE11-20Mapping.pdf

UEE30820 Certificate III in Electro-technology-Electrician Online

UEENEE30820 Course Weekly Lessons

UEE30820 Course Online Video Lectures (U Kyaw Naing) in combined format

UEE30820 Course Online Video Lectures (U Kyaw Naing) for each units

Electrical Trade 2022 +BAppEng Electrical QR Code

Handouts+Class Online Exercises

Online Site entry QR Code

Handout Textbook Exercise QR Code

Handout Textbook Exercise QR Code Mod

Assessments

-

Electrical Principle Textbook Powerpoint Slides

<http://www.iqytechnicalcollege.com/Electrical Preinciple Textbook Powerpoint Slides.pdf>

Electrical Trade Practice Textbook Powerpoint Slides

<http://www.iqytechnicalcollege.com/Electrical Trade Practice Textbook Powerpoint Slides.pdf>

3000-2018

<http://www.iqytechnicalcollege.com/3000-2018.pdf>

3008

www.iqytechnicalcollege.com/3008.pdf

Electrical Principle Textbook

Part 1

<http://www.iqytechnicalcollege.com/Electrical Principle Textbook Part 1.pdf>

[Part 2](#)

<http://www.iqytechnicalcollege.com/Electrical%20Principle%20Textbook%20Part%202.pdf>

[Part 3](#)

<http://www.iqytechnicalcollege.com/Electrical%20Principle%20Textbook%20Part%203.pdf>

[Part 4](#)

<http://www.iqytechnicalcollege.com/Electrical%20Principle%20Textbook%20Part%204.pdf>

Electrical Wiring Practice Textbook

[Part 1](#)

www.iqytechnicalcollege.com/Electrical Wiring Textbook Part 1.pdf

[Part 2](#)

www.iqytechnicalcollege.com/Electrical Wiring Textbook Part 2.pdf

[Part 3](#)

www.iqytechnicalcollege.com/Electrical Wiring Textbook Part 3.pdf

[Part 4](#)

www.iqytechnicalcollege.com/Electrical Wiring Textbook Part 4.pdf

WEEKLY ELECTRICAL TRADE AND ELECTRICAL ENGINEERING LECTURES

[UEENEEE101A](#)

(UEECD0007 Apply work health and safety codes and practices in the workplace)

[UEENEEE102A](#)

UEECD0019 Fabricate, assemble and dismantle utilities industry components*

[UEENEEE104A](#)

UEECD0044 Solve problems in multiple path circuits*

UEECD0046 Solve problems in single path circuits*

[UEENEEE105A](#)

UEECD0020 Fix and secure electrotechnology equipment*

[UEENEEE107A](#)

UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications*

[UEENEEE137A](#)

(UEECD0016 Document and apply measures to control WHS risks associated with electrotechnology work*)

[UEENEEG006A](#)

UEEEL0024 Test and connect alternating current (a.c.) rotating machines*

UEEEL0025 Test and connect transformers*

[UEENEEG033A](#)

UEEEL0008 Evaluate and modify low voltage heating equipment and controls*

UEEEL0009 Evaluate and modify low voltage lighting circuits, equipment and control

UEEEL0010 Evaluate and modify low voltage socket outlets circuits*

[UEENEEG063A](#)

UEEEL0003 Arrange circuits, control and protection for electrical installations*

UEEEL0039 Design, install and verify compliance and functionality of general electrical installations*

[UEENEEG101A](#)

UEEEL0021 Solve problems in magnetic and electromagnetic devices

UEEEL0019 Solve problems in direct current (d.c.) machines

[UEENEEG102A](#)

UEEEL0020 Solve problems in low voltage a.c. circuit

[UEENEEG103A](#)

UEEEL0012 Install low voltage wiring, appliances, switchgear and associated accessories*

[UEENEEG104A](#)

UEEEL0012 Install low voltage wiring, appliances, switchgear and associated accessories*

[UEENEEG105A](#)

UEEEL0039 Design, install and verify compliance and functionality of general electrical installations*

www.iqytechnicalcollege.com/CapstoneLesson.pdf

www.iqytechnicalcollege.com/CapstoneLesson.htm

CAPSTONE LESSON-QR Code

www.iqytechnicalcollege.com/CAPSTONE LESSON-QR Code.pdf

Capstone Lecture 1

<https://www.iqytechnicalcollege.com/CapstoneLesson1.mp4>

<https://youtu.be/7PoAU3hAGek>

Capstone Lecture 2

<https://mega.nz/folder/TdAUmRKC#PfOPIn6Q-DSa1t2bdkiQQg>

<https://youtu.be/SiWfEbzU3y8>

Capstone Lecture 3

<https://www.iqytechnicalcollege.com/CapstoneLesson3.mp4>

[UEENEEG106A](#)

UEEEL0023 Terminate cables, cords and accessories for low voltage circuits*

[UEENEEG107A](#)

UEEEL0018 Select wiring systems and select cables for low voltage electrical installations

UEEEL0039 Design, install and verify compliance and functionality of general electrical installations*

[UEENEEG108A](#)

UEEEL0008 Evaluate and modify low voltage heating equipment and controls*

UEEEL0009 Evaluate and modify low voltage lighting circuits, equipment and controls*

EEEL0010 Evaluate and modify low voltage socket outlets circuits*

[UEENEEG109A](#)

UEEEL0005 Develop and connect electrical control circuits*

[UEENEEK142A](#)

UEERE0001 Apply environmentally and sustainable procedures in the energy sector

[UEENEEC020B](#)

UEECO0023 Participate in electrical work and competency development activities

[UEENEEC003A](#)

UEEIC0024 Plan the electrical installation of integrated systems*

UEEIC0047 Use instrumentation drawings, specifications, standards and equipment manuals

[UETTSRIS67A](#)

UETTDRRF06 Perform rescue from a live LV panel*

[UETTDRIS68A](#)

UETTDRIS67 Solve problems in energy supply network equipment*

UETTDRIS68 Solve problems in energy supply network protection equipment and systems* 4

[UEENEH111A](#)

UEEEC0075 Troubleshoot single phase input d.c power supplies

[UEENEFF102A](#)

UEEEL0004 Carry out basic repairs to electrical components and equipment*

[Programmable Logic Controller](#)

[Australian Electrician Programmable Logic Controller](#)

[Practical](#)

[Capstone](#)

Advanced Diploma in Electrical Engineering & Technology

<http://electricaldiploma2018.blogspot.com/>

Electrical Trades Workbooks+Videos

[Electrical Trade Class Lessons](#)

<http://www.iqytechnicalcollege.com/etradelesson.htm>

Electrical Engineer Trade Practice

<http://www.iqytechnicalcollege.com/electricalengineerpractice.htm>

UEENEEE101A

UEENEEE101A

UEENEEE101A References for Answers (Zip File-use computer)

Video

E101 Workplace Safety

E102 FABRICATE, ASSEMBLE AND DISMANTLE UTILITIES INDUSTRY COMPONENTS

E105 FIX AND SECURE ELECTROTECHNOLOGY EQUIPMENT

E101

BASIC LEGAL REQUIREMENTS COVERING
WORK HEALTH & SAFETY.

Video 1

<https://www.youtube.com/watch?v=4Re6rXdaaGE>

Video 2

<https://www.youtube.com/watch?v=BSPzR-01AnQ>

Video 3

<https://www.safeworkaustralia.gov.au/media-centre/work-health-and-safety-what-it-means-volunteers-video>

Work Environment

Video 4

<https://www.youtube.com/watch?v=cnlXp6IKiuk>

Video 5

<https://www.youtube.com/watch?v=8X8F0ozqbxE>

Video 6

<https://www.youtube.com/watch?v=KoDiuL6NqgQ>

Video 7

<https://www.youtube.com/watch?v=mCrZ5E6Iv9Q>

Video 8

<https://www.youtube.com/watch?v=3C6js5JtCIQ>

Video 9

<https://www.youtube.com/watch?v=dPupXa-PXHA>

MANUAL HANDLING

Video 10

<https://www.youtube.com/watch?v=22SBe-jt6dg>

Video 11

<https://www.youtube.com/watch?v=KIMSSJunXB4>

Video 12

https://www.youtube.com/watch?v=lm7_T_YB9V8

CHEMICALS IN THE WORKPLACE

Video 13

<https://www.youtube.com/watch?v=-UFVYOUN4UM>

Video 14

<https://www.youtube.com/watch?v=8queMM7VVfw>

Video 15

<https://www.youtube.com/watch?v=h51cl6Zv-mg>

Video 16

https://www.youtube.com/watch?v=XL4AI_hvnGA

Video 17

<https://www.youtube.com/watch?v=uiB8qnlZTAM>

Video 18

<https://www.youtube.com/watch?v=WmIiS8grpBw>

WORKING AT HEIGHTS

Video 19

<https://www.youtube.com/watch?v=00f0A1ppnRo>

Video 20

<https://www.youtube.com/watch?v=sYxhX83xLvg>

Video 21

<https://www.youtube.com/watch?v=IClw3tgioVI>

CONFINED SPACES

Video 22

<https://www.youtube.com/watch?v=pmNWLYGMyz4>

Video 23

<https://www.youtube.com/watch?v=rbfWE7D9RZk>

Video 24

https://www.youtube.com/watch?v=7_ddT-TFII8

Video 25

<https://www.youtube.com/watch?v=ZXPCeQWd9Bo>

PHYSICAL & PHYSIOLOGICAL HAZARDS

Video 26

https://www.youtube.com/watch?v=MqkmC8_Pg7w

Video 27

<https://www.youtube.com/watch?v=PZmNZi8bon8>

Video 28

<https://www.youtube.com/watch?v=rGQFpuwdjAU>

Video 29

<https://www.youtube.com/watch?v=uOzFAzCDr2o>

WORKING WITH ELECTRICITY

Video 30

<https://www.youtube.com/watch?v=WNE-Fgw8sOg>

Video 31

<https://www.youtube.com/watch?v=NU4k8KUd2ho>
Video 32

<https://www.youtube.com/watch?v=vhtQGQbuq6w>

LIFE SUPPORT – CPR IN THE WORKPLACE
Video 33

<https://www.youtube.com/watch?v=FREYDwotESE>
Video 34

<https://www.youtube.com/watch?v=zAouN81I09E>
Video 35

<https://www.youtube.com/watch?v=XHRatUnbAgM>
Video 36

<https://www.youtube.com/watch?v=fb29LCjX4-E>

UEENEEE102A

[UEENEEE102A](#)

[UEENEEE102A References for Answers \(Zip File-use computer\)](#)

Video

E102
Section 3 Measuring and marking out
Video 37

<https://www.youtube.com/watch?v=V2QT2C5larE>

Section 4 Holding and cutting
Video 38

<https://www.youtube.com/watch?v=CDka-JDSHbY>
Video 39

<https://www.youtube.com/watch?v=itNp2efc9I0>
Video 40

<https://www.youtube.com/watch?v=YH8e1gbTmfc>

Section 5 Drills and drilling
Video 41

<https://www.youtube.com/watch?v=OBO7Keg2Lv8>

Section 6 Tapping and threading
Video 42

<https://youtu.be/KVnN4jiB7Gk>
Video 43

<https://youtu.be/SXxp9Hjyz40>

Video 44

<https://youtu.be/X5Ef-MBSIFI>

Video 45

https://youtu.be/EJpgT2VCB_w

Video 46

https://youtu.be/Bafd_jAxNII

Video 47

https://youtu.be/k_t69LVxUpQ

Video 48

<https://youtu.be/YVHY5Uh1o7c>

Video 49

<https://youtu.be/bkrUzGooA9k>

Section 7 General Hand Tools

Video 50

<https://www.youtube.com/watch?v=4o0tqF0jDdo>

Section 8 Joining techniques

Video 51

<https://www.youtube.com/watch?v=ZLlwfXSXEvc>

Video 52

<https://www.youtube.com/watch?v=vduHaM9VwWA>

Video 53

<https://www.youtube.com/watch?v=KvSY8XC9C6I>

Section 9 Portable electric power tools

Video 54

<https://www.youtube.com/watch?v=wid-SXfbv68>

Video 55

<https://www.youtube.com/watch?v=7Ux2C3zKiDQ>

Video 56

<https://www.youtube.com/watch?v=s4dFfks4IAw>

Section 10 Sheet metal work

Video 57

<https://www.youtube.com/watch?v=L0YgSmfwzWY>

Video 58

<https://www.youtube.com/watch?v=UbliMiADZ40>

Video 59

<https://www.youtube.com/watch?v=BT4xZmKGp2k>

Video 60

<https://www.youtube.com/watch?v=JgNaSII8Obo>

Video 61

https://www.youtube.com/watch?v=BznWB67y_6Y

Section 11 Low tolerance measurement

Video 62

<https://www.youtube.com/watch?v=Vysi-sPoNds>

Video 63

<https://www.youtube.com/watch?v=l2dEN3MLC0A>

Video 64

<https://www.youtube.com/watch?v=aS9OgYadjpY>

Section 12 Dismantling and assembly

Video 65

https://www.youtube.com/watch?v=_zSxxZpadq8

Video 66

<https://www.youtube.com/watch?v=JMXzUfGn-So>**UEENEEE104A****Work Book**

E104	DC Circuit Problems
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2019 Student Workbook UEENEEE104A - Solve problems in DC circuits[http://www.iqytechnicalcollege.com/2019 Student Workbook UEENEEE104A - Solve problems in DC circuits.pdf](http://www.iqytechnicalcollege.com/2019%20Student%20Workbook%20UEENEEE104A%20-%20Solve%20problems%20in%20DC%20circuits.pdf)**UEENEEE104ADC Students Workbook 2**www.iqytechnicalcollege.com/UEENEEE104ADC.pdf**DC Principle E104 Lesson Slides**[www.iqytechnicalcollege.com/DC Principle E104 Lesson Slides.pdf](http://www.iqytechnicalcollege.com/DC%20Principle%20E104%20Lesson%20Slides.pdf)

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E104A-Res_Colour_Codehttp://www.iqytechnicalcollege.com/E104A-Res_Colour_Code.jpg

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E104 Theory Practical Practice[www.iqytechnicalcollege.com/E104 Theory Practical Practice.pdf](http://www.iqytechnicalcollege.com/E104%20Theory%20Practical%20Practice.pdf)

T1 Basic electrical concepts

Video 67

<https://www.youtube.com/watch?v=UOzbcXMJ8K4>

Video 68

<https://www.youtube.com/watch?v=49Zlel5XaDU>

Video 69

https://www.youtube.com/watch?v=X_KWJ_MinOU

Video 70

<https://www.youtube.com/watch?v=s6hRPyjTx6k>

Video 71

<https://www.youtube.com/watch?v=Vd2UJilPbag>

Video 72

<https://www.youtube.com/watch?v=qIHCVs69biE>

Video 73

<https://www.youtube.com/watch?v=GHRHRBMjno0>

Video 74

<https://www.youtube.com/watch?v=xu9tn15ujTw>

Video 75

<https://www.youtube.com/watch?v=LuYPKhx2kD4>

Video 76

<https://www.youtube.com/watch?v=ukxRD2SShoc>

T2 Basic electrical circuit

Video 77

<https://www.youtube.com/watch?v=VnnpLaKsqGU>

Video 78

<https://www.youtube.com/watch?v=52JoONLGI2s>

Video 79

https://www.youtube.com/watch?v=OGa_b26eK2c

Video 80

<https://www.youtube.com/watch?v=D2monVkCkX4>

Video 81

<https://www.khanacademy.org/science/ap-physics-1/ap-circuits-topic/current-ap/v/circuits-part-1>

T3 Ohm's Law

Video 82

<https://www.youtube.com/watch?v=bJCVAJLDaPU>

Video 83

<https://www.youtube.com/watch?v=Ubj41bNadHE>

Video 84

https://www.youtube.com/watch?v=_rSHqvjDksg

Video 85

<https://www.youtube.com/watch?v=nq2Mzfmk20>

Video 86

<https://www.khanacademy.org/science/ap-physics-1/ap-circuits-topic/current-ap/v/circuits-part-1>

Video 87

<http://videos.mathtutordvd.com/detail/videos/engineering-circuits---vol-1---ohm-s-law-kirchhoff-s-laws/video/lf0IMDZVwTI/03---what-is-ohm-s-law-in-circuit-analysis>

T4 Electrical power

Video 88

<https://www.youtube.com/watch?v=VSpB3HivkhY>

Video 89

<https://www.youtube.com/watch?v=Uf76pThNXZc>

Video 90

<https://www.youtube.com/watch?v=49Zlel5XaDU>

Video 91

<https://www.youtube.com/watch?v=mc9790hitAg>

Video 92

https://www.youtube.com/watch?v=F_5sV8s9ZEA

Video 93

<https://www.youtube.com/watch?v=3zt7DWUiaDE>

Video 94

<https://www.khanacademy.org/science/ap-physics-1/ap-circuits-topic/introduction-to-dc-circuits-ap/v/electric-power>

Video 95

<https://www.khanacademy.org/science/in-in-class10th-physics/in-in-electricity/in-in-electric-power-and-heating-effect-of-current/v/electric-power-energy>

T5 Effects of electrical current

Video 96

https://www.youtube.com/watch?v=B5_t45V8z1A

Video 97

<https://www.youtube.com/watch?v=Wu4iwwKN3tg>

Video 98

<https://www.youtube.com/watch?v=zzmHjg0PORY>

Video 99

<https://www.youtube.com/watch?v=OqYwuCm7oyU>

Video 100

<https://www.youtube.com/watch?v=uVqvqNLldsw>

Video 101

<https://www.youtube.com/watch?v=3AUQ003fpmo>

Video 102

<https://www.youtube.com/watch?v=EQexYBspQgk>

Video 103

<https://www.youtube.com/watch?v=9mInPbYbWKY>

Video 104

<https://www.khanacademy.org/science/in-in-class10th-physics/in-in-magnetic-effects-of-electric-current>

Video 105

<https://www.examfear.com/free-video-lesson/Class-7/Physics/Electric-Current-and-its-Effects/part-1.htm>

T6 EMF sources energy sources and conversion electrical energy

Video 106

<https://www.khanacademy.org/science/physics/circuits-topic/circuits-with-capacitors/v/energy-capacitor>

Video 107

<https://www.khanacademy.org/science/physics/magnetic-forces-and-magnetic-fields/magnetic-flux-faradays-law/v/faradays-law-for-generating-electricity>

Video 108

<https://www.khanacademy.org/science/physics/magnetic-forces-and-magnetic-fields/magnetic-field-current-carrying-wire/v/magnetism-12-induced-current-in-a-wire>

Video 109

<https://www.khanacademy.org/science/physics/electric-charge-electric-force-and-voltage/electric-potential-voltage/v/voltage>

Video 110

<https://www.khanacademy.org/science/in-in-class10th-physics/in-in-electricity/in-in-electric-potential-potential-difference/v/intro-to-potential-difference-voltage>

Video 111

<https://www.khanacademy.org/science/physics/electric-charge-electric-force-and-voltage/electric-potential-voltage/v/electric-potential-energy>

T7 Resistors

Video 112

<https://www.youtube.com/watch?v=xUZh94qvlqU>

Video 113

<https://www.youtube.com/watch?v=Gc1wVdbVI0E>

Video 114

<https://www.youtube.com/watch?v=QgDW4htzf0>

Video 115

<https://www.khanacademy.org/science/physics/circuits-topic/circuits-resistance/v/circuits-part-2>

Video 116

<https://www.khanacademy.org/science/physics/circuits-topic/circuits-resistance/v/circuits-part-4>

Video 117

<https://www.khanacademy.org/science/ap-physics-1/ap-circuits-topic/series-circuits-ap/v/ee-parallel-resistors-1>

Video 118

<https://www.khanacademy.org/science/ap-physics-1/ap-circuits-topic/series-circuits-ap/v/ee-series-resistors>

T8 Series circuits

Video 119

<https://www.youtube.com/watch?v=LECvF5VCz1w>

Video 120

<https://www.youtube.com/watch?v=xUZh94qvlqU>

Video 121

<https://www.youtube.com/watch?v=7mdc-lRrW1c>

Video 122

<https://www.khanacademy.org/science/physics/circuits-topic/circuits-resistance/v/circuits-part-2>

Video 123

<https://www.khanacademy.org/science/physics/circuits-topic/circuits-resistance/v/circuits-part-2>

Video 124

<https://www.khanacademy.org/science/ap-physics-1/ap-circuits-topic/current-ap/v/circuits-part-1>

T9 Parallel circuits**Video 125**

https://www.youtube.com/watch?v=h_yPktKnHq4

Video 126

<https://www.youtube.com/watch?v=ViqqnA-C76o>

Video 127

https://www.youtube.com/watch?v=x2EuYqj_0Uk

Video 128

<https://www.youtube.com/watch?v=Yu2hASB78to>

Video 129

<https://www.youtube.com/watch?v=xUZh94qvlqU>

T10 Series/parallel circuits**Video 130**

<https://www.youtube.com/watch?v=xUZh94qvlqU>

Video 131

<https://www.youtube.com/watch?v=7mdc-lRrW1c>

Video 132

<https://www.youtube.com/watch?v=CFQ4NJmK2vA>

Video 133

https://www.youtube.com/watch?v=x2EuYqj_0Uk

Video 134

<https://www.youtube.com/watch?v=3dQO2bJl1LQ>

Video 135

<https://www.youtube.com/watch?v=wejj5s31Cts>

Video 136

<https://www.youtube.com/watch?v=nqS-gHq2Ylo>

Video 137

<https://www.youtube.com/watch?v=8lMO7VAyEKY>

Video 138

<https://www.youtube.com/watch?v=OFFDuPvom6A>

Video 139

https://www.youtube.com/watch?v=x7xTGq_2TU0

T11 Factors affecting resistance**Video 140**

<https://www.youtube.com/watch?v=RaxBggzAxFo>

Video 141

<https://www.youtube.com/watch?v=w4xT6jMoubQ>

Video 142

<https://www.youtube.com/watch?v=4TW60IOORwA>

Video 143

<https://www.youtube.com/watch?v=M3fWNAIKGaM>

Video 144

<https://www.youtube.com/watch?v=HBzCn89LNxY>

Video 145

<https://www.youtube.com/watch?v=4bqKxj1Yzp8>

Video 146

https://www.youtube.com/watch?v=QYacs_GygXo

Video 147

<https://www.youtube.com/watch?v=J-0LPki8K6Q>

T12 Effects of meters in a circuit

Video 148

<https://www.khanacademy.org/science/ap-physics-1/ap-circuits-topic/dc-ammeters-and-voltmeters-ap/v/voltmeters-and-ammeters>

Video 149

<https://www.khanacademy.org/science/physics/circuits-topic/circuits-resistance/v/circuits-part-2>

Video 150

<https://www.youtube.com/watch?v=ULcrfjn-GHc>

Video 151

<https://www.youtube.com/watch?v=M0JiLVFD6hI>

Video 152

<https://www.khanacademy.org/science/ap-physics-1/ap-circuits-topic/current-ap/v/circuits-part-1>

Video 153

<https://www.youtube.com/watch?v=cPOZvJCpziM>

T13 Resistance measurement

Video 154

https://www.youtube.com/watch?v=OGa_b26eK2c

Video 155

<https://www.youtube.com/watch?v=edxyBS6Tb1Y>

Video 156

<https://www.youtube.com/watch?v=ehf2HGCckY4>

Video 157

<https://www.youtube.com/watch?v=TdeU6UCCfTY>

Video 158

https://www.youtube.com/watch?v=CsXUuuV4_sw

Video 159

<https://www.youtube.com/watch?v=OteuJOANaU0>

Video 160

<https://www.khanacademy.org/science/ap-physics-1/ap-circuits-topic/dc-ammeters-and-voltmeters-ap/v/voltmeters-and-ammeters>

T14 Capacitors and Capacitance

Video 161

<https://www.khanacademy.org/science/physics/circuits-topic/circuits-with-capacitors/v/capacitors-and-capacitance>

Video 162

<https://www.youtube.com/watch?v=W7vY3ldfwP0>

Video 163

<https://www.youtube.com/watch?v=ngOC4eUQl8Y>

Video 164

https://www.youtube.com/watch?v=Cmll_BmOf0l

Video 165

<https://www.youtube.com/watch?v=uVvh18owfZk>

Video 166

<https://www.youtube.com/watch?v=L6cgSxpGmDo>

Video 167

https://www.youtube.com/watch?v=f_MZNsEqyQw

T15 Capacitors in Series and Parallel

Video 168

<https://www.youtube.com/watch?v=zaT4JorVUz0>

Video 169

https://www.youtube.com/watch?v=x7xTGq_2TU0

Video 170

<https://www.khanacademy.org/science/physics/circuits-topic/circuits-with-capacitors/v/capacitors-parallel>

Video 171

<https://www.khanacademy.org/science/physics/circuits-topic/circuits-with-capacitors/v/capacitors-series>

Video 172

<http://videos.mathtutordvd.com/detail/videos/engineering-circuits---vol-4---capacitors-inductors/video/3dQO2bJl1LQ/lesson-15---series-parallel-circuits-with-capacitors-and-inductors-engineering-circuits>

DC Electrical Circuit

Electrical Circuits I

E104	DC Circuit Problems
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E003+E004 / E104

Page 1 to 8 of

[www.highlightcomputer.com/Video Lessons.pdf](http://www.highlightcomputer.com/Video%20Lessons.pdf)

E003+E004 (Stage 1)

DC Circuit Problems

The links contain the following lessons

Video 173

Lesson 1 DC series circuit

<http://youtu.be/eUdLAhcBIYg>

Video 174

Lesson 2 DC parallel circuit
Video 175

<http://youtu.be/9E3HcLDZKrQ>

Lesson 3 DC Parallel circuit problems
Video 176

<http://youtu.be/TQlx2Yv87gw>

Lesson 4 DC series parallel circuit 1
Video 177

<http://youtu.be/ZW3dugR9NOU>

Lesson 5 DC series parallel circuit 2
Video 178

<http://youtu.be/FFMUNoEYoa8>

Lesson 6 Lamp and resistor circuit
Video 179

<http://youtu.be/7FbKyuOKYHk>

Lesson 7 Wheatstone bridge
Video 180

<http://youtu.be/6EG3Y03Ldw8>

Video 181

<http://youtu.be/xG2l2yJWXj0>

UEENEEE137A Document and apply measures to control OHS risks associated with electrotechnology work

T1 Risk management and assessment of risk

Video 182

<https://www.youtube.com/watch?v=PZmNZi8bon8>

Video 183

https://www.youtube.com/watch?v=Cp_XEhexcDw

Video 184

<https://www.youtube.com/watch?v=fY6KGN72d7Q>

Video 185

<https://www.youtube.com/watch?v=EWdfovZlg2g>

Video 186

<https://video.sas.com/category/videos/risk-management>

T2 Hazards and risks and control measures in working on construction sites

Video 187

<https://www.youtube.com/watch?v=PZmNZi8bon8>

Video 188

<https://www.youtube.com/watch?v=00f0A1ppnRo>

Video 189

<https://www.youtube.com/watch?v=n3jwo2jipvY>

T3 Hazards associated with extra-low voltage, low-voltage and high-currents

Video 190

<https://www.youtube.com/watch?v=5oVcTcRw1WU>

Video 191

<https://www.youtube.com/watch?v=V7dPek4TVeU>

Video 192

<https://www.youtube.com/watch?v=fdxE8bl8Kmo>

Video 193

https://www.youtube.com/watch?v=4UxH2_5FYBo

Video 194

<https://www.youtube.com/watch?v=BJNOcHPc8OA>

Video 195

<https://www.youtube.com/watch?v=XDf2nhfxVzg>

T4 Hazards and risks and control measures associated with high-voltage

Video 196

https://www.youtube.com/watch?v=y_oZ7JmAcEo

Video 197

<https://www.youtube.com/watch?v=7N0gphlpqfs>

Video 198

<https://www.youtube.com/watch?v=0QqLE0NZYqQ>

Video 199

https://www.youtube.com/watch?v=j-_U8G5la6M

Video 200

<https://www.atlantictraining.com/shop/electrical-safety-high-voltage-part-1-awareness-training-video-1487.html>

T5 Hazards and risks and control measures in working with low voltage equipment

Video 201

<https://www.youtube.com/watch?v=5oVcTcRw1WU>

Video 202

<https://www.youtube.com/watch?v=V7dPek4TVeU>

Video 203

<https://www.youtube.com/watch?v=beCG-yRLGI0>

Video 204

<https://www.youtube.com/watch?v=VubHQtQB4j0>

Video 205

<https://www.youtube.com/watch?v=Uu1GXRxicao>

Video 206

<https://www.youtube.com/watch?v=aQ-ggQBShLg>

Video 207

<https://www.youtube.com/watch?v=Xj08ZZ3uXSI>

Video 208

<https://www.youtube.com/watch?v=Gkvlk3wN1Dg>

Video 209

https://www.youtube.com/watch?v=CH35i_lfxwA

T6 Hazards and risks and control measures associated with harmful, devices, materials, gases, dusts and airborne contaminant

Gas

Video 210

https://www.youtube.com/watch?v=nMEh4j_G8Nw

Video 211

<https://www.youtube.com/watch?v=B3eDx8V1a7w>

Video 212

<https://www.youtube.com/watch?v=X7hOIsBZTPE>

Video 213

<https://www.youtube.com/watch?v=lcGvwCtXFTA>

Video 214

<https://www.youtube.com/watch?v=MPA71aPSBoQ>

Dusts

Video 215

<https://www.youtube.com/watch?v=pkAmwRfij7Y>

Video 216

<https://www.youtube.com/watch?v=3X868gVvzH0>

Video 217

<https://www.youtube.com/watch?v=sWLPMgpMQCU>

Video 218

<https://www.youtube.com/watch?v=3d37Ca3E4fA>

Video 219

<https://www.youtube.com/watch?v=6av4faxxaZg>

Airborne contaminant

Video 220

<https://worksafe.tas.gov.au/topics/Health-and-Safety/hazards-and-solutions-a-z/hazards-and-solutions-a-z-pages/a/airborne-contaminants>

Video 221

<https://www.youtube.com/watch?v=QEB7wE-YFXg>

Video 222

<https://www.youtube.com/watch?v=Tzpz5fko-fg>

Video 223

<https://www.youtube.com/watch?v=yEDAvCHf6pc>

Video 224

<https://www.youtube.com/watch?v=xOaRGBZp6NY>

Devices

Video 225

https://www.youtube.com/watch?v=Veyv2IFc_Fk

T7 Determine the degree of the risk

Video 226

<https://study.com/academy/lesson/risk-identification-definition-purpose-examples.html>

Video 227

<https://www.youtube.com/watch?v=EWdfovZlg2g>

Video 228

<https://www.youtube.com/watch?v=fY6KGN72d7Q>

Video 229

<https://www.youtube.com/watch?v=wSOYZ9RU3AE>

Video 230

<https://www.youtube.com/watch?v=-QbeJyVWWg>

Video 231

<https://www.youtube.com/watch?v=PZmNZi8bon8>

Video 232

<https://www.youtube.com/watch?v=BVh2iOMUvik>

Video 233

https://www.youtube.com/watch?v=Cp_XEhexcDw

Video 234

<https://www.youtube.com/watch?v=vLjxESIK0qc>

Video 235

<https://www.youtube.com/watch?v=UBYwGbVKOL8>

Video 236

<https://www.youtube.com/watch?v=zzn2EWUSXng>

T8 Use control measures to eliminate or control the risk

Eliminate

Video 237

<https://www.youtube.com/watch?v=yCcJx2yIYMg>

Video 238

<https://www.youtube.com/watch?v=NhROO4JdHrk>

Video 239

https://www.youtube.com/watch?v=_VVu3DpxJCI

Video 240

<https://www.youtube.com/watch?v=lrCOIRGpeeM>

Control

Video 241

https://www.youtube.com/watch?v=Cp_XEhexcDw

Video 242

<https://www.youtube.com/watch?v=DZMb6SAycR8>

Video 243

<https://www.youtube.com/watch?v=g2JcGBgABJk>

Reduction

Video 244

<https://www.youtube.com/watch?v=BqjJ0QHuyOo>

Video 245

https://www.youtube.com/watch?v=Cp_XEhexcDw

Video 246

<https://www.youtube.com/watch?v=-LzwObt5rwg>

Video 247

<https://www.youtube.com/watch?v=UBYwGbVK0L8>

Video 248

https://www.youtube.com/watch?v=SA5F_GIXbok

T9 Engaging in monitoring and reviewing processes to ensure control measures remain valid.

Monitoring

Video 249

https://www.youtube.com/watch?v=Cp_XEhexcDw

Video 250

<https://www.youtube.com/watch?v=7CSFrBempH8>

Video 251

<https://www.youtube.com/watch?v=8nqQ4rwRwm0>

Video 252

<https://www.youtube.com/watch?v=T96bp0xSkNs>

Video 253

https://www.youtube.com/watch?v=TdWd_4glh_0

Video 254

<https://www.youtube.com/watch?v=c1uBL77UCSY>

Review

Video 255

<https://www.youtube.com/watch?v=Enn6GG5IU4o>

Video 256

<https://www.youtube.com/watch?v=p90xzyQ2VzI>

Video 257

<https://www.youtube.com/watch?v=HKWqOWITG6Q>

Video 258

<https://www.youtube.com/watch?v=UBYwGbVK0L8>

Video 259

<https://www.youtube.com/watch?v=-LzwObt5rwg>

UEENEEE105A

[UEENEEE105A](#)

[UEENEEE105A References for Answers \(Zip File-use computer\)](#)

Video

E105

Hollow wall fixing and support

Video 260

<https://www.youtube.com/watch?v=nNFv65-QTPI>

Video 261

<https://www.youtube.com/watch?v=e3hjpNe5wk>

Video 262

<https://www.youtube.com/watch?v=x15ZUOwuOz4>

Solid fixing and support

Video 263

<https://www.youtube.com/watch?v=cuQpIxH5N6Q>

Video 264

<https://www.youtube.com/watch?v=AkI9FE14y-8>

Video 265

<https://www.youtube.com/watch?v=TQ13gug7aQ4>

Metal Fixings

Video 266

https://www.youtube.com/watch?v=wFioP_1aBdY

Video 267

<https://www.youtube.com/watch?v=Z38Aq9ykUCM>

Video 268

https://www.youtube.com/watch?v=uZd_zYwHpA

Adhesives and Tapes

Video 269

<https://www.youtube.com/watch?v=HHuTrcXNxOk>

Video 270

<https://www.youtube.com/watch?v=d9ykCVb9rKg>

Video 271

<https://www.youtube.com/watch?v=HhO5q-dVwnQ>

UEENEEG006A

UEENEEG006A-Motor

UEENEEG006A-Transformer

HV Machines

[http://www.iqytechnicalcollege.com/UEENEEG158A Assessment V1 2016 10 09.pdf](http://www.iqytechnicalcollege.com/UEENEEG158A%20Assessment%20V1%202016%2010%2009.pdf)

KS01-EG006A Single and three-phase transformers

T1 Transformer construction

Video 272

https://www.youtube.com/watch?v=vh_aCAHThTQ

Video 273

<https://www.youtube.com/watch?v=qjMTfV7gQAo>

Video 274

https://www.youtube.com/watch?v=IKk-_a8hhq8

Video 275

https://www.youtube.com/watch?v=Cx4_7ljoBA

Video 276

<https://electronicsforu.com/videos-slideshows/videos/transformer-working>

T2 Transformer operation

Video 277

<https://www.youtube.com/watch?v=UchitHGF4n8>

Video 278

https://www.youtube.com/watch?v=k5O6_joxM2E

Video 279

<https://www.youtube.com/watch?v=Wa1PvQ7Bqeo>

Video 280

<https://electronicsforu.com/videos-slideshows/videos/transformer-working>

T3 Transformer losses, efficiency and cooling

Video 281

<https://www.youtube.com/watch?v=RiyWqpDOuSI>

Video 282

<https://www.youtube.com/watch?v=bqR5iqXaiFs>

Video 283

<https://www.youtube.com/watch?v=qm9mZ0YGHM4>

Video 284

<https://www.youtube.com/watch?v=qm9mZ0YGHM4>

Video 285

<https://www.youtube.com/watch?v=bQ3e1GMwGXE>

Video 286

<https://www.youtube.com/watch?v=LNgf2nojsqc>

T4 Transformer voltage regulation and percent impedance

Video 287

<https://www.youtube.com/watch?v=RiyWqpDOuSI>

Video 288

<https://www.youtube.com/watch?v=IE-INpSXEik>

Video 289

<https://www.youtube.com/watch?v=n4RhZQlcYyg>

Video 290

<https://www.youtube.com/watch?v=b26mP8SSvtg>

Video 291

<https://www.youtube.com/watch?v=bFQ57hONOWg>

Video 292

https://www.youtube.com/watch?v=c5_AEmzSY1s

Video 293

<https://www.youtube.com/watch?v=xBHXChJWg9s>

Video 294

<https://www.youtube.com/watch?v=aVq-t4f3eaE>

Video 295

<https://www.youtube.com/watch?v=u8-Jsg7mbly>

Video 296

<https://www.youtube.com/watch?v=Lvn5aGMza64>

T5 Parallel operation of transformers and transformer auxiliary equipment

Parallel Operation

Video 297

<https://www.youtube.com/watch?v=f07onVbEXTk>

Video 298

<https://www.youtube.com/watch?v=jOdiJSruL3Y>

Video 299

https://www.youtube.com/watch?v=UbB_jHUw3Vs

Video 300

https://www.youtube.com/watch?v=UPSa_l8dSfY

Video 301

<https://www.youtube.com/watch?v=P1jyqbezngo>

Video 302

<https://www.youtube.com/watch?v=BfjJVnzRNk0>

Video 303

<https://www.youtube.com/watch?v=iIYSRVwmGSQ>

Video 304

https://www.youtube.com/watch?v=WV6Ge_XnaWc

Video 305

<https://www.youtube.com/watch?v=IP09AaeE304>

Video 306

<https://www.youtube.com/watch?v=YfZo-G5atZA>

Transformer auxiliary equipment

Video 307

<https://www.youtube.com/watch?v=a0s5jmb9890>

T6 Auto-transformers and instrument transformers

Auto-transformers

Video 308

<https://www.youtube.com/watch?v=IltVwhoPvh0>

Video 309

<https://www.youtube.com/watch?v=XB3XEuF83jU>

Video 310

https://www.youtube.com/watch?v=A6KTFaxTs_k

Video 311

<https://www.youtube.com/watch?v=ir9KmQTkUVQ>

Video 312

https://www.youtube.com/watch?v=_wrmZkkCuDM

Video 313

<https://www.youtube.com/watch?v=t-ap8lL77E8>

Video 314

<https://www.youtube.com/watch?v=RMU1uvo49eI>

Instrument transformers

Video 315

https://www.youtube.com/watch?v=O_0UX13t3dw

Video 316

<https://www.youtube.com/watch?v=0i0qywFa1PQ>

Video 317

<https://www.youtube.com/watch?v=c8UncikLIeE>

Video 318

<https://www.youtube.com/watch?v=g-sfLW7y8xA>

Video 319

<https://www.youtube.com/watch?v=fXQa0aEhfmU>

Video 320

<https://www.youtube.com/watch?v=U2vji08cfns>

Video 321

<https://www.youtube.com/watch?v=uzOskHxbXRQ>

KS02-EG006A Alternating current rotating machines

T1 Operating Principles of three phase induction motors

Video 322

<https://www.youtube.com/watch?v=XzTncl6OVus>

Video 323

https://www.youtube.com/watch?v=XdtnJYYQj_0

Video 324

<https://www.youtube.com/watch?v=DsVbaKZZOFQ>

Video 325

<https://www.youtube.com/watch?v=LtJoJBUSE28>

Video 326

<https://www.youtube.com/watch?v=uaSALDXpdvE>

Video 327

https://www.youtube.com/watch?v=AQqyGNOP_3o

Video 328

<https://www.youtube.com/watch?v=Mle-ZvYi8HA>

Video 329

<https://www.youtube.com/watch?v=2C1dqjLna7M>

T2 Three phase induction motor construction

Video 330

<https://www.youtube.com/watch?v=rQcjPwwUC5U>

Video 331

<https://www.youtube.com/watch?v=Mle-ZvYi8HA>

Video 332

<https://www.youtube.com/watch?v=XzTncl6OVus>

Video 333

<https://www.youtube.com/watch?v=5RAOI5gYj74>

Video 334

<https://www.youtube.com/watch?v=uaSALDXpdvE>

Video 335

https://www.youtube.com/watch?v=XdtnJYYQj_0

Video 336

<https://www.youtube.com/watch?v=IQsAaP331SY>

Video 337

<https://www.youtube.com/watch?v=z5GQyziCKII>

Video 338

<https://www.youtube.com/watch?v=DsVbaKZZOFO>

T3 Three phase induction motor characteristics

Video 339

<https://www.youtube.com/watch?v=1LRPHASUPLE>

Video 340

<https://www.youtube.com/watch?v=N7sP2OrfMzY>

Video 341

<https://www.youtube.com/watch?v=5RAOI5gYj74>

Video 342

https://www.youtube.com/watch?v=f5biKsVoh_U

Video 343

<https://www.youtube.com/watch?v=CaSdKCwISLE>

Video 344

<https://www.youtube.com/watch?v=b5tc0FrYk60>

Video 345

<https://www.youtube.com/watch?v=b5tc0FrYk60>

Video 346

<https://www.youtube.com/watch?v=T2gtb7HqWbc>

Video 347

<https://www.youtube.com/watch?v=Mle-ZvYi8HA>

T4 Single phase motors – split phase

Video 348

https://www.youtube.com/watch?v=Zgev-_oHSwM

Video 349

<https://www.youtube.com/watch?v=M1hZ5DkYYXc>

Video 350

<https://www.youtube.com/watch?v=awrUxv7B-a8>

Video 351

<https://www.youtube.com/watch?v=FYxkInpmRNI>

Video 352

<https://www.youtube.com/watch?v=tQ9UqMiJVzI>

Video 353

<https://www.youtube.com/watch?v=tQ9UqMiJVzI>

Video 354

<https://www.youtube.com/watch?v=7Nkomt1dRNo>

Video 355

<https://www.youtube.com/watch?v=YzuyTuoJ6-0>

T5 Single phase motors – capacitor and shaded pole types

Video 356

<https://www.youtube.com/watch?v=tQ9UqMiJVzI>

Video 357

https://www.youtube.com/watch?v=_vy4zGs0ynw

Video 358

<https://www.youtube.com/watch?v=2XYdTogWclA>

Video 359

<https://www.youtube.com/watch?v=MyEnwJ1Lazg>

Video 360

<https://www.youtube.com/watch?v=r0djT5OS9wk>

Video 361

<https://www.youtube.com/watch?v=yL5egmaRxUM>

Video 362

<https://www.youtube.com/watch?v=awrUxv7B-a8>

T6 Single phase motors – universal

Video 363

<https://www.youtube.com/watch?v=0PDRJKz-mqE>

Video 364

<https://www.youtube.com/watch?v=2XYdTogWclA>

Video 365

https://www.youtube.com/watch?v=onjFFoOC_yk

Video 366

<https://www.youtube.com/watch?v=TumJjfcVVuo>

Video 367

<https://www.youtube.com/watch?v=SrPHQh-M3pM>

Video 368

https://www.youtube.com/watch?v=__nS3OeIY-s

Video 369

<https://www.youtube.com/watch?v=5UshcZMqfI8>

T7 Motor protection

Video 370

<https://www.youtube.com/watch?v=Y3Vtnloy3Kc>

Video 371

<https://www.youtube.com/watch?v=rEx4sAESYMK>

Video 372

<https://www.youtube.com/watch?v=zXSWmGs99tQ>

Video 373

<https://www.youtube.com/watch?v=iF-5SVaualo>

Video 374

<https://www.youtube.com/watch?v=aml0VGzNXEo>

Video 375

<https://www.youtube.com/watch?v=fzK4llRo6Jl>

Video 376

<https://www.youtube.com/watch?v=aWNTuKv8AdA>

Video 377

<https://www.youtube.com/watch?v=aWNTuKv8AdA>

Video 378

<https://www.youtube.com/watch?v=hDkrbfjHho>

Video 379

<https://www.youtube.com/watch?v=mR-laBKrJdA>

T8 Three phase synchronous machines- operation principles and construction

Video 380

<https://www.youtube.com/watch?v=lcoLbF5-4ws>

Video 381

<https://www.youtube.com/watch?v=eRzVFeCacSM>

Video 382

<https://www.youtube.com/watch?v=Vk2jDXxZlhs>

Video 383

https://www.youtube.com/watch?v=YxO_h9nQefs

Video 384

<https://www.youtube.com/watch?v=fyC-aGuILlo>

Video 385

<https://www.youtube.com/watch?v=oiHClnaZc4o>

Video 386

<https://www.youtube.com/watch?v=mwOhJI4vxps>

Video 387

<https://www.youtube.com/watch?v=kMUJ0IRxO3w>

T9 Alternators and generators

Video 388

<https://www.youtube.com/watch?v=tiKH48EMgKE>

Video 389

https://www.youtube.com/watch?v=jCy5r14_vow

Video 390

<https://www.youtube.com/watch?v=BrYPu5ZZ1pY>

Video 391

<https://www.youtube.com/watch?v=7vJ7fFnk1XY>

Video 392

<https://www.khanacademy.org/science/in-in-class10th-physics/in-in-magnetic-effects-of-electric-current/electric-generator/v/ac-dc-generator>

[Lesson 1 AC Machine Introduction.zip](#)

Video 393

<http://youtu.be/-WfOPhNDn8>

[Lesson 2 Slip+Equivalent Ckt.zip](#)

Video 394

<http://youtu.be/De79cbk2EOQ>

Video 395

<http://youtu.be/gprZTitiOao>

[Lesson 3 Power Transfer.zip'](#)

Video 396

<http://youtu.be/pCMcMPBrUEE>

Video 397

<http://youtu.be/7tJjDuG5SQc>

Video 398

<http://youtu.be/dV9VFsXeFnY>

[Lesson 4 Test for equivalent ckt.zip](#)

Video 399

<http://youtu.be/HF4bJ6vWX2c>

[Lesson 5 Motor starting and control.zip](#)

Video 400

<http://youtu.be/Utfbsz7Ti6M>

Video 401

<http://youtu.be/VnNlesPgeZk>

Video 402

<http://youtu.be/AMO70oGS2Fs>

Video 403

<http://youtu.be/FQVMCMDSTwo>

[Lesson 6 Synchronous machine introduction.zip](#)

Video 404

<http://youtu.be/KM9TJcr2MBk>

[Lesson 7 Power transformer rating 1.zip](#)

Video 405

http://youtu.be/gjWJVQA_h_jA

[Lesson 8 Power transformer rating 2.zip](#)

Video 406

<http://youtu.be/JonzO8JD-k4>

[Lesson 9 Open circuit short circuit test.zip](#)

Video 407

<http://youtu.be/Ru-KIKv40OY>

[Lesson 10 Transformer regulation.zip](#)

Video 408

<http://youtu.be/t6lZMwMj-B4>

[Lesson 11 Power transformer connection.zip](#)

Video 409

<http://youtu.be/ijg8PISDN1>

G101+G102+G006

[Elect Fundamental E029+G012+G001+G002+G060.zip](#)

www.highlightcomputer.com/ElectFundamentalE029G012G001G002G006Mod.zip

UEENEEG033A

[UEENEEG033A](#)

[UEENEEG033A References for Answers 1 \(Zip File-use computer\)](#)

[UEENEEG033A References for Answers 2 \(Zip File-use computer\)](#)

[UEENEEG033A References for Answers 3 \(Zip File-use computer\)](#)

[UEENEEG033A References for Answers 4 \(Zip File-use computer\)](#)

HOT WATER

<https://youtu.be/J-HIQ6vymIM?si=DddUm5vII3x6SWVu>

T1 Lighting circuits – looping at the light/switch encompassing:

Video 410

<https://www.youtube.com/watch?v=dnpV781c6Sw>

Video 411

<https://www.youtube.com/watch?v=n-BpmdWNyZM>

Video 412

<https://www.youtube.com/watch?v=CaaLw01fMo8>

Video 413

<https://www.youtube.com/watch?v=gOy486TUtHY>

Video 414

<https://www.youtube.com/watch?v=DoVSdqeFkhE>

T2 Circuits for socket outlets

Video 415

<https://www.youtube.com/watch?v=hZN6hiGLtrE>

Video 416

<https://www.youtube.com/watch?v=At7AnMV7Xd0>

Video 417

<https://www.youtube.com/watch?v=xuB5b3OUHQk>

Video 418

<https://www.youtube.com/watch?v=dnpV781c6Sw>

T3 Final sub-circuits and segregation

Video 419

<https://www.youtube.com/watch?v=KrkPiAHy6pc>

Video 420

https://www.youtube.com/watch?v=TQOt_1awk9s

Video 421

<https://www.youtube.com/watch?v=AZenZflQQgw>

T4 Electrical heating control devices

Video 422

<https://www.youtube.com/watch?v=ZwapTUBP6jw>

Video 423

https://www.youtube.com/watch?v=qCXmyhEY_k4

Video 424

<https://www.youtube.com/watch?v=nnMchf1Tgzc>

T5 Fixed electrical heating appliances

Video 425

https://www.youtube.com/watch?v=ldeEo-6W_8A

Video 426

https://www.youtube.com/watch?v=6E-F_dUZgz8

Video 427

<https://www.youtube.com/watch?v=fo8AKrayQDg>

Video 428

<https://www.youtube.com/watch?v=LxnZQZm9Ycl>

Video 429

https://www.youtube.com/watch?v=qCXmyhEY_k4

Video 430

<https://www.youtube.com/watch?v=4HdxQhBRDUI>

Video 431

<https://www.youtube.com/watch?v=ZwapTUBP6jw>

Video 432

<https://www.youtube.com/watch?v=BlgYNapUeNc>

Video 433

<https://www.youtube.com/watch?v=qJbNpQZQPN4>

T6 Electrical water heater operation

Video 434

https://encrypted-vtbn0.gstatic.com/video?q=tbn:ANd9GcRgVkaVsd1QTpepvg9cDw8_3v5-OT0idTHNN9KHKT9UhaSdz0x

Video 435

<https://www.youtube.com/watch?v=-rpqSS17jL4>

Video 436

<https://www.youtube.com/watch?v=nifLZkl7bJl>

Video 437

<https://www.youtube.com/watch?v=nnMchf1Tgzc>

Video 438

<https://www.youtube.com/watch?v=Samu69sHw8E>

Video 439

https://www.youtube.com/watch?v=_YZkgZVCzn0

Video 440

https://www.youtube.com/watch?v=qCXmyhEY_k4

Video 441

<https://www.youtube.com/watch?v=Jti8w87a02Y>

Video 442

<https://www.youtube.com/watch?v=ZT3PjkDmkFM>

Video 443

<https://www.youtube.com/watch?v=atYmHCSwAns>

T7 Alternative supplies

Video 444

<https://www.youtube.com/watch?v=RnvCbquYeIM>

Video 445

<https://www.youtube.com/watch?v=1kUE0BZtTRc>

Video 446

<https://www.khanacademy.org/science/ap-physics-1/ap-circuits-topic/introduction-to-dc-circuits-ap/v/electric-power>

T8 Installation of batteries

Video 447

<https://www.youtube.com/watch?v=9OVtk6G2TnQ>

Video 448

https://www.youtube.com/watch?v=_QlbwvEgrCl

Video 449

<https://www.youtube.com/watch?v=OHOSR0o2j5M>

Video 450

<https://www.youtube.com/watch?v=ZRruGTRHgiw>

Video 451

<https://www.youtube.com/watch?v=7IWzpF4WPUQ>

T9 Fire protection – residential fire and smoke alarms

Video 452

<https://www.youtube.com/watch?v=4LQ6uhXAzvk>

Video 453

<https://www.youtube.com/watch?v=hyMZU1FlxWM>

Video 454

https://www.youtube.com/watch?v=anUNqXpn_jA

Video 455

<https://www.youtube.com/watch?v=GART34Xbszg>

Video 456

<https://www.youtube.com/watch?v=cVjyDgFrb2g>

T10 Emergency and evacuation lighting and lighting control

Video 457

<https://www.youtube.com/watch?v=XJ8LcyDY-RE>

Video 458

<https://www.youtube.com/watch?v=crUjgnvhn5Y>

Video 459

<https://www.youtube.com/watch?v=PEcb7vnlzMA>

Video 460

https://www.youtube.com/watch?v=w_n0tMNORlw

Video 461

<https://www.youtube.com/watch?v=he5lIO2O9RI>

Video 462

<https://www.youtube.com/watch?v=Yykxy-2IOT8>

Video 463

<https://www.youtube.com/watch?v=0ZDrOHTJs0Y>

Video 464

<https://www.youtube.com/watch?v=xVMqw6FogSM>

T11 Lighting concepts and incandescent lighting

Video 465

https://www.youtube.com/watch?v=5_hWbogorrQ

Video 466

https://www.youtube.com/watch?v=9N7_2NYhX7E

Video 467

<https://www.youtube.com/watch?v=2Y6bB86HmdA>

Video 468

https://www.youtube.com/watch?v=eJ0f_L1Kjs0

Video 469

<https://www.youtube.com/watch?v=vrMWHmPg0h8>

Video 470

<https://www.youtube.com/watch?v=flc5iP0KwTg>

T12 Fluorescent low intensity discharge lighting

Video 471

<https://www.youtube.com/watch?v=VqybWHDcwMI>

Video 472

<https://www.youtube.com/watch?v=4IbjTFDZXBw>

Video 473

<https://www.youtube.com/watch?v=E5leW7gEXkl>

Video 474

https://www.youtube.com/watch?v=L1IQG7_DA9o

Video 475

<https://www.youtube.com/watch?v=5-BMi9fxHpl>

Video 476

<https://www.youtube.com/watch?v=5oEEQdlaFZY>

Video 477

<https://www.youtube.com/watch?v=uKxr3tk-Y34>

Video 478

<https://www.youtube.com/watch?v=AMMH3JG3IJE>

T13 High intensity discharge lighting

Video 479

<https://www.youtube.com/watch?v=5-BMi9fxHpl>

Video 480

<https://www.youtube.com/watch?v=Jj8AS2UCxiA>

Video 481

<https://www.youtube.com/watch?v=5oEEQdlaFZY>

Video 482

<https://www.youtube.com/watch?v=3oHwO-Xu8w4>

[G033+G063+G107 \(Week 1 to 6 Lessons\)\(G033\)](#)

[G063 Wk 7+8](#)

[G033 Hot Water System](#)

[G106 Cable Termination \(UG Cable\)](#)

[G106 Cable Termination](#)

[G106+G033 Practical](#)

[G033+G063+G107 Week 10 to 15](#)

UEENEEK142A

[UEEKEEK142A](#)

[UEEKEEK142A Workbook](#)

[UEENEEK142A Exercises](#)

[K142 Notes](#)

T1 Sustainable work practice

Video 483

<https://www.youtube.com/watch?v=QGwumD-tRms>

Video 484

https://www.youtube.com/watch?v=te_GWwK7R8w

Video 485

<https://www.youtube.com/watch?v=aVBdmWI7YEK>

Video 486

https://www.youtube.com/watch?v=x_sJzVe9P_8

Video 487

<https://www.youtube.com/watch?v=oJAbATJCugs>

Video 488

<https://www.youtube.com/watch?v=GRIhFuGZyPc>

Video 489

https://www.youtube.com/watch?v=BPJIM_hCFj0

Video 490

<https://www.youtube.com/watch?v=dyJsB1OibEo>

Video 491

<https://www.youtube.com/watch?v=DYHAZaasdxl>

Video 492

http://www.youtube.com/watch?v=zi9K_a0cU6Y

Video 493

<https://www.youtube.com/watch?v=pIKE-ZEiG64>

Video 494

<https://www.youtube.com/watch?v=sDqGzMdhL1M>

Video 495

<https://www.youtube.com/watch?v=PhzBabiSjtg>

Video 496

<https://www.zdnet.com/video/important-lessons-for-industry-and-regulators/>

Video 497

<https://www.youtube.com/watch?v=Pl8L8dqg8vA>

Video 499

https://www.youtube.com/watch?v=HnFS5gg2_aQ

Video 499

<https://www.youtube.com/watch?v=hltv8-nzcUc>

Video 500

<https://www.youtube.com/watch?v=mfEwakoSJ68>

Video 501

<https://www.youtube.com/watch?v=M3JOS6ptklw>

Video 502

<https://www.youtube.com/watch?v=HuFR5XBLYfU>

Video 503

<https://www.youtube.com/watch?v=KmvEb501vC8>

Video 504

<https://www.youtube.com/watch?v=OvwIRTYvU8o>

Video 505

<https://www.youtube.com/watch?v=OvwIRTYvU8o>

Video 506

<https://www.khanacademy.org/humanities/us-government-and-civics/us-gov-interactions-among-branches/us-gov-structures-powers-and-functions-of-congress/v/how-a-bill-becomes-a-law>

Video 507

<https://www.youtube.com/watch?v=DC8OUnxO3-g>

Video 508

<https://www.youtube.com/watch?v=n9defOwVWS8>

Video 509

<https://www.youtube.com/watch?v=Ww5ocmaLcoo>

T2 Techniques for reducing carbon produced energy

Video 510

<https://www.youtube.com/watch?v=Ohj6lII9sCw>

Video 511

<https://www.youtube.com/watch?v=-wcDHZ7Z-hQ>

Video 512

<https://www.youtube.com/watch?v=82Nw6lyi6YM>

Video 513

https://www.ted.com/talks/jennifer_wilcox_a_new_way_to_remove_co2_from_the_atmosphere/transcript?language=en

Video 514

<https://www.youtube.com/watch?v=NQ2aWABYTIc>

Video 515

<https://www.youtube.com/watch?v=AaFtQ21h1-E>

Video 516

https://www.youtube.com/watch?v=BPJJM_hCFj0

Video 517

<https://www.youtube.com/watch?v=s3TW9K31bhk>

Video 518

<https://www.youtube.com/watch?v=yfNgsKrPKsg>

Video 519

<https://www.youtube.com/watch?v=2fLWBZAyHsQ>

Video 520

https://www.youtube.com/watch?v=BPJJM_hCFj0

Video 521

<https://www.youtube.com/watch?v=LTzEB5xu7oM>

Video 522

https://www.youtube.com/watch?v=_zV_9b9BJwk

Video 523

https://www.youtube.com/watch?v=p5w1Uggn8_w

Video 524

<https://www.youtube.com/watch?v=xKhmiie4H2c>

Video 525

<https://www.youtube.com/watch?v=7RhQ5JO6u9k>

Video 526

<https://www.youtube.com/watch?v=ic7dDQrVBcU>

Video 527

<https://www.youtube.com/watch?v=WfcYnYWlNog>

Video 528

<https://www.youtube.com/watch?v=1kUE0BZtTRc>

Video 529

<https://www.youtube.com/watch?v=RnvCbquYeIM>

Video 530

<https://www.youtube.com/watch?v=SiOkYVccKSc>

Video 531

<https://www.youtube.com/watch?v=T4xKThjcKaE>

Video 532

<https://www.youtube.com/watch?v=wMOpMka6PJI>

Video 533

<https://www.youtube.com/watch?v=xKxrkht7CpY>

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Workbook

Answers

T1 Safety principles to which electrical systems in building and premises

Video 534

https://www.youtube.com/watch?v=TTh8eT_g9yI

Video 535

<https://www.youtube.com/watch?v=-pWWn11vSuk>

Video 536

<https://www.youtube.com/watch?v=XZlekCgE9K4>

Video 537

<https://www.youtube.com/watch?v=XZlekCgE9K4>

Video 538

<https://www.youtube.com/watch?v=TmDc1KnH3Bo>

Video 539

<https://www.youtube.com/watch?v=UuTowptYlrM>

T2 Circuit and control arrangements

Video 540

<https://www.youtube.com/watch?v=52JoONLGI2s>

Video 541

https://www.youtube.com/watch?v=x2EuYqj_0Uk

Video 542

<https://www.khanacademy.org/science/physics/circuits-topic/circuits-resistance/v/circuits-part-2>

Video 543

<https://www.youtube.com/watch?v=nqS-gHg2Ylo>

Video 544

https://www.youtube.com/watch?v=OGa_b26eK2c

Video 545

<https://www.youtube.com/watch?v=amIOVGzNXEo>

T3 Hazards and risks in an electrical installation

Video 546

<https://www.youtube.com/watch?v=wal2KP1bbIY>

Video 547

<https://www.youtube.com/watch?v=AOgkxPmSYJk>

Video 548

<https://www.youtube.com/watch?v=A0CX3B8x3fA>

Video 549

<https://www.youtube.com/watch?v=vLjxESIK0qc>

Video 550

<https://www.youtube.com/watch?v=2N7fOYZYx2g>

Video 551

<https://www.youtube.com/watch?v=Froye737GPU>

Video 552

<https://www.youtube.com/watch?v=rlxvJ1x1ZzM>

Video 553

<https://www.youtube.com/watch?v=2nZ9IS6VHFU>

T4 Protection against indirect contact

Video 554

<https://www.youtube.com/watch?v=g9OqAaZ1PMI>

Video 555

<https://www.youtube.com/watch?v=4pPGuwtjVOE>

Video 556

<https://www.youtube.com/watch?v=WKRkel8iqrk>

Video 557

https://www.youtube.com/watch?v=dRkzvj_2Hn8

T5 Earthing

Video 558

<https://www.youtube.com/watch?v=ZgkOuD5z87o>

Video 559

<https://www.youtube.com/watch?v=DT084oFwsHM>

Video 560

https://www.youtube.com/watch?v=aITb42_NeFA

Video 561

https://www.youtube.com/watch?v=zLW_7TPf310

Video 562

<https://www.youtube.com/watch?v=InM3J5auQBk>

Video 563

<https://www.youtube.com/watch?v=HktY-HLJeNo>

Video 564

<https://www.youtube.com/watch?v=gSyUFp3Qk2I>

Video 565

<https://www.youtube.com/watch?v=VxvrLydy6PA>

T6 Protection against overload and short circuit current

Video 566

<https://www.youtube.com/watch?v=-pgkQv4Y1CI>

Video 567

<https://www.youtube.com/watch?v=NqYIXP3a07o>

Video 568

<https://www.youtube.com/watch?v=1nPPeXEKjvg>

Video 569

<https://www.khanacademy.org/science/in-in-class10th-physics/in-in-magnetic-effects-of-electric-current/in-in-domestic-circuits/v/overload-short-circuit-domestic-circuits-part-3>

T7 Devices for automatic disconnection of supply

Video 570

https://www.youtube.com/watch?v=dRkzvJ_2Hn8

Video 571

<https://www.youtube.com/watch?v=5rHXBD9UYg4>

Video 572

<https://www.youtube.com/watch?v=rjymYhVeUNs>

Video 573

<https://www.youtube.com/watch?v=YEN7J9wDyxk>

Video 574

<https://www.youtube.com/watch?v=Vl3tvO51RTI>

Video 575

<https://www.youtube.com/watch?v=Vl3tvO51RTI>

Video 576

<https://www.youtube.com/watch?v=INtmo5dK54o>

Video 577

https://www.youtube.com/watch?v=zLW_7TPf310

Video 578

https://www.youtube.com/watch?v=vh_aCAHThTQ

Video 579

https://www.youtube.com/watch?v=vh_aCAHThTQ

Video 580

https://www.youtube.com/watch?v=g9aDizJpd_s

Video 581

<https://www.youtube.com/watch?v=52JoONLGI2s>

T8 Protection against over voltage and under voltage

Video 582

<https://www.youtube.com/watch?v=0lVWYtLebSY>

Video 583

<https://www.youtube.com/watch?v=2TUJIFethyHI>

Video 584

<https://www.youtube.com/watch?v=PDkIpIB5B5o>

Video 585

<https://www.youtube.com/watch?v=nUYdUXd3M-g>

Video 586

<https://www.youtube.com/watch?v=66aW8U8bTNE>

Video 587

<https://www.youtube.com/watch?v=Oa8CCaE2kRk>

Video 588

<https://www.youtube.com/watch?v=pkIpl-mXVrc>

Video 589

<https://www.youtube.com/watch?v=rZtnolkQNSQ>

Video 590

<https://www.youtube.com/watch?v=3GIOH3wGyw0>

T9 Control of an electrical installation and circuits

Video 591

<https://www.youtube.com/watch?v=V17X-Xzbz-Y>

Video 592

<https://www.youtube.com/watch?v=9uMIQycxygQ>

Video 593

<https://www.youtube.com/watch?v=fKgM82ydSxA>

Video 594

<https://www.youtube.com/watch?v=LhXEP4wQRIY>

Video 595

<https://www.youtube.com/watch?v=LhXEP4wQRIY>

Video 596

<https://www.youtube.com/watch?v=amI0VGzNXEo>

Video 597

<https://www.youtube.com/watch?v=LuYPKhx2kD4>

T10 Switchboards / distribution boards

Video 598

<https://www.youtube.com/watch?v=FI28ypE1YWk>

Video 599

<https://www.youtube.com/watch?v=RJgvFF6W3U>

Video 600

<https://www.youtube.com/watch?v=bJzFdoUfw0U>

Video 601

<https://www.youtube.com/watch?v=mzk0g6isQjI>

Video 602

<https://www.youtube.com/watch?v=ieIVhHgsF1A>

Video 603

<https://www.youtube.com/watch?v=cGckXtYhwd8>

Video 602

<https://www.youtube.com/watch?v=bEK4S-W3fK0>

Advanced Electrical Wiring

[G033+G103](#)

[Advanced Electrical Wiring](#)

G003+G004+G007+ G103+G104+G033+G063

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[www.highlightcomputer.com/Video Lessons.pdf](http://www.highlightcomputer.com/Video%20Lessons.pdf)

[Electrical wiring + Electrical Installation requirement](#)

[Lesson 1 Electrical installation protection.zip](#)

(G063)

Video 603

<http://youtu.be/wMGnk7cYluQ>

[Lesson 2 Electrical system safety.zip](#)

(G063)

Video 604

<http://youtu.be/ndBNctBCyLE>

Video 605

<http://youtu.be/y4-suDOQnfA>

[Lesson 3 Heating+Cable ckt protection exercise.zip](#)

Video 606

http://youtu.be/8-iuLr8FD_8

Video 607

<http://youtu.be/Z7zqONrPYjg>

(G063)

[Lesson 4 Wiring system.zip](#)

Video 608

<http://youtu.be/9u-B6I21leU>

Video 609

<http://youtu.be/MF8Ytr840lk>

[Lesson 5 Hazardous area electrical system.zip](#)

Video 610

<http://youtu.be/5UwCK6vJXxM>
(G033)

[Lesson 6 Overload protection RCD.zip](#)

Video 611

<http://youtu.be/GW8yl5i6ERo>
(G063)

Video 612

<http://youtu.be/fPf-i5CfEQs>
(G063)

[G003+G004+G007 Lesson 8 Switch board installation.zip](#)

Video 613

<http://youtu.be/aHTOKlhkoSY>
Video 614

<http://youtu.be/eDcGnJb8rPM>
(G033)

[Lesson 9 Cable selection+Maximum demand.zip](#)

(G033)

Video 615

<http://youtu.be/JJ1UFFDSsBk>

[Lesson 10 Electrical installation safety testing.zip](#)

Video 616

<http://youtu.be/fmbSQH0D300>
Video 617

<http://youtu.be/Tc7oIF8Ube0>
Video 618

<http://youtu.be/1GD9GK8i31o>
Video 619

<http://youtu.be/u3nCqr6tKC4>
(G033)

The links contain the following lessons

Lesson 1 Electrical installation protection

Lesson 2 Electrical system safety

Lesson 3 Heating+Cable ckt protection exercise

Lesson 4 Wiring system

Lesson 5 Hazardous area electrical system
Lesson 6 Overload protection RCD
Lesson 7 RCD + Metering
Lesson 8 Switch board installation
Lesson 9 Cable selection+Maximum demand
Lesson 10 Electrical installation safety testing

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G101 Lessons

[Note Book 1](#)

[Note Book 2](#)

[Note Book 3](#)

[Work Book 1](#)

[Work Book 2](#)

T1 Magnetism

Video 620

<https://www.youtube.com/watch?v=8Y4JSp5U82I>

Video 621

<https://www.youtube.com/watch?v=s94suB5uLWw>

Video 622

<https://www.youtube.com/watch?v=DR9w4koW2EA>

Video 623

<https://www.khanacademy.org/science/physics/magnetic-forces-and-magnetic-fields/magnets-magnetic/v/introduction-to-magnetism>

Video 624

<https://www.khanacademy.org/test-prep/mcat/physical-processes/magnetism-mcat/v/magnetism-part-1>

Video 625

<https://www.generationgenius.com/videolessons/magnets-and-static-electricity-video-for-kids/>

T2 Electromagnetism

Video 626

<https://www.youtube.com/watch?v=V-Gus-qIT74>

Video 627

<https://www.youtube.com/watch?v=Dc8Vay7mRss>

Video 628

<https://www.youtube.com/watch?v=RVjnoCu10vc>

Video 629

<https://www.youtube.com/watch?v=bht9AJ1eNYc>

Video 630

<https://www.youtube.com/watch?v=HQdLFEiVeCA>

Video 631

<https://www.youtube.com/watch?v=gsECYAH0Q38>

Video 632

<https://www.khanacademy.org/science/in-in-class10th-physics/in-in-magnetic-effects-of-electric-current/electromagnetic-induction/v/electromagnetic-induction-faradays-experiments>

Video 633

<https://www.khanacademy.org/science/physics/discoveries/electromagnet/v/discovery-of-electromagnetism>

Video 634

<http://www.sciencekids.co.nz/videos/physics/magnets.html>

T3 Magnetic circuits

Video 635

<https://www.youtube.com/watch?v=2ZwQZgyYkIE>

Video 636

<https://www.youtube.com/watch?v=M-QfX2fvpp4>

Video 637

<https://www.youtube.com/watch?v=UdaDs-zKfsA>

Video 638

<https://www.youtube.com/watch?v=kgs72Urd7bo>

Video 639

<https://www.youtube.com/watch?v=RxbJo2kDRxE>

Video 640

<https://www.youtube.com/watch?v=dmuao2m7Ohg>

Video 641

<https://www.youtube.com/watch?v=7MN1U8Uktjk>

Video 642

<https://www.youtube.com/watch?v=J73AxA1Yk7M>

Video 643

<https://www.youtube.com/watch?v=9zRodZ2Bj4c>

Video 644

https://www.youtube.com/watch?v=_MDE9W5zJ8g

T4 Electromagnetic induction

Video 645

<https://www.khanacademy.org/science/in-in-class10th-physics/in-in-magnetic-effects-of-electric-current/electromagnetic-induction/v/electromagnetic-induction-faradays-experiments>

Video 646

<https://www.youtube.com/watch?v=KGTZPTnZBFE>

Video 647

<https://www.youtube.com/watch?v=yA8gZM3fghc>

Video 648

https://www.youtube.com/watch?v=pQp6bmJPU_0

Video 649

https://www.youtube.com/watch?v=jeTmla00_rc

Video 650

<https://www.youtube.com/watch?v=48Z3PRO5L3E>

T5 Inductance

Video 651

<https://www.youtube.com/watch?v=VyRWOGVEuUc>

Video 652

<https://www.youtube.com/watch?v=3gQjrnABjzA>

Video 653

<https://www.youtube.com/watch?v=B8CPGiK59f8>

Video 654

<https://www.youtube.com/watch?v=NgwXkUt3XxQ>

Video 655

<https://www.youtube.com/watch?v=p2p03RoO-Jo>

Video 656

<https://www.youtube.com/watch?v=jFKJpTJs9A>

Video 657

<https://www.youtube.com/watch?v=jFKJpTJs9A>

Video 658

<https://www.youtube.com/watch?v=xuUKyxMCLJ0>

Video 659

<https://www.youtube.com/watch?v=ukBFPrXiKWA>

Video 660

<https://www.youtube.com/watch?v=3pfAWwbnuBg>

Video 661

<https://www.khanacademy.org/science/electrical-engineering/ee-circuit-analysis-topic/ee-natural-and-forced-response/v/ee-inductor-equations>

T6 Measurement Instruments

Video 662

<https://www.youtube.com/watch?v=xLjk5DrScEU>

Video 663

<https://www.youtube.com/watch?v=UGQwSSfV7js>

Video 664

<https://www.youtube.com/watch?v=iTr07nyG7Tk>

Video 665

<https://www.youtube.com/watch?v=aKEdm-pVLIs>

Video 666

<https://www.youtube.com/watch?v=xPyBrUv1gy8>

Video 667

<https://www.youtube.com/watch?v=3eYmFjHnQjY>

Video 668

<https://www.youtube.com/watch?v=EXtfLWBixHc>

T7 Magnetic devices

Video 669

<https://www.youtube.com/watch?v=oypDGvBoKlQ>

Video 670

<https://www.youtube.com/watch?v=yXCeuSiTOug>

Video 671

<https://www.youtube.com/watch?v=YPkAcVPom50>

Video 672

<https://www.generationgenius.com/videolessons/magnets-and-static-electricity-video-for-kids/>

Video 673

<https://www.khanacademy.org/science/physics/magnetic-forces-and-magnetic-fields/magnets-magnetic/v/introduction-to-magnetism>

Video 674

<https://www.khanacademy.org/science/in-in-class10th-physics/in-in-magnetic-effects-of-electric-current/magnets-and-magnetic-fields/v/intro-to-magnetic-fields-why-fields>

T8 Machine principles

Video 675

https://www.youtube.com/watch?v=Uhp9lu_oSEA

Video 676

<https://www.youtube.com/watch?v=fbwZkhaF0dk>

Video 677

<https://www.youtube.com/watch?v=9qNYNC563Ss>

Video 678

<https://www.youtube.com/watch?v=uVBHm1ukhA8>

T9 Rotating machine construction, testing and maintenance

Video 679

<https://www.youtube.com/watch?v=JPn5Ou-N0b0>

Video 680

<https://www.youtube.com/watch?v=LAtPHANefQo>

Video 681

<https://www.youtube.com/watch?v=tiKH48EMgKE>

Video 682

<https://encrypted-vtbn0.gstatic.com/video?q=tbn:ANd9GcRyvrc1qH2gSiYk48c-zHOqX8KG6ECsSSMY2jencK2WQtDUo3If>

Video 683

<https://www.youtube.com/watch?v=ahdWhObzS6I>

Video 684

<https://www.youtube.com/watch?v=FUjZwMMoltQ>

Video 685

<https://www.youtube.com/watch?v=1eWNI9v5mz0>

T10 Generators

Video 686

<https://www.khanacademy.org/science/in-in-class10th-physics/in-in-magnetic-effects-of-electric-current/electric-generator/v/ac-dc-generator>

Video 687

<https://www.youtube.com/watch?v=zaOGMpimJLs>

Video 688

<https://www.youtube.com/watch?v=6dF3LDzb-tE>

Video 689

<https://www.youtube.com/watch?v=0gWJ8OqkpHM>

Video 690

https://www.youtube.com/watch?v=_yJA7HEkxto

Video 691

<https://www.youtube.com/watch?v=zOafa7OJLrU>

Video 692

<https://www.youtube.com/watch?v=-xebh8wU8gY>

Video 693

<https://www.youtube.com/watch?v=lhBZSU253KE>

Video 694

<https://www.youtube.com/watch?v=OpL0joqJmqY>

Video 695

<https://www.youtube.com/watch?v=OpL0joqJmqY>

T11 Motors

Video 696

<https://www.youtube.com/watch?v=SufipszRw4Y>

Video 697

https://www.youtube.com/watch?v=oRof35Wfy_c

Video 698

<https://www.youtube.com/watch?v=LAtPHANefQo>

Video 699

<https://www.youtube.com/watch?v=6MnmcMYbsfQ&vl=en>

Video 700

<https://www.youtube.com/watch?v=1OfLgpFq6Rc>

Video 701

https://www.youtube.com/watch?v=onjFFoOC_yk

Video 702

<https://www.youtube.com/watch?v=ETxt1jW9XOw>

Video 703

<https://www.khanacademy.org/science/physics/magnetic-forces-and-magnetic-fields/electric-motors/v/magnetism-9-electric-motors>

Video 704

<https://www.khanacademy.org/science/in-in-class10th-physics/in-in-magnetic-effects-of-electric-current/electric-motor-dc/v/electric-motor>

T12 Machine efficiency

Video 705

<https://www.youtube.com/watch?v=LUoeCChLp5Q>

Video 706

<https://www.youtube.com/watch?v=JjSICSHDKrU>

Video 707

https://www.youtube.com/watch?v=RWFScx_MX1M

Video 708

<https://www.khanacademy.org/science/physics/work-and-energy/mechanical-advantage/v/introduction-to-mechanical-advantage>

Video 709

<https://www.khanacademy.org/science/ap-physics-1/ap-circuits-topic/introduction-to-dc-circuits-ap/v/electric-power>

Page 137 to 142 of
[www.highlightcomputer.com/Video Lessons.pdf](http://www.highlightcomputer.com/Video%20Lessons.pdf)
Electro-magnetism

The links contain the following lessons

Lesson 1 Magnatism+Electro magnet

Video 710

<http://youtu.be/Lm166hHi3HA>

Lesson 2 Electric & Magnetic Circuit

Video 711

<http://youtu.be/Ny1JfhUVFAk>

Lesson 3 Electro magnetic induction

Video 712

<http://youtu.be/IYYQBeM8QgM>

Lesson 4 Inductor+Relay

Video 713

<http://youtu.be/brn-HHfKSXM>

Lesson 5 Magnetic problems

Video 714

<http://youtu.be/c85cSn6HTqg>

G101+G102+G006

[Elect Fundamental E029+G012+G001+G002+G060.zip](#)

www.highlightcomputer.com/ElectFundamentalE029G012G001G002G006Mod.zip

UEENEEG102A

[G102 Lessons](#)

[Work Book 1](#)

[Work Book 2](#)

T1 Alternating Current Quantities

Video 715

<https://www.youtube.com/watch?v=BPJyL8UCvPs>

Video 716

<https://www.youtube.com/watch?v=lWteL-v7bpw>

Video 717

<https://www.youtube.com/watch?v=Jveer7vhjGo>

Video 718

https://www.youtube.com/watch?v=F2_IDiXR3Sg

Video 719

<https://www.khanacademy.org/science/electrical-engineering/ee-circuit-analysis-topic/ee-ac-analysis/v/ee-ac-analysis-intro1>

Video 720

<https://www.khanacademy.org/science/ap-physics-1/ap-circuits-topic/current-ap/v/circuits-part-1>

T2 Phasors Diagrams

Video 721

<https://www.youtube.com/watch?v=zlmwvijn1Y>

Video 722

<https://www.youtube.com/watch?v=GSDb8uz4q2o>

Video 723

<https://www.youtube.com/watch?v=UzwiX4jYvws>

Video 724

https://www.youtube.com/watch?v=TM4mvZm_XcE

Video 725

<https://www.youtube.com/watch?v=YBaWoQlbD2w>

Video 726

<https://www.youtube.com/watch?v=09ICuVJY1ek>

T3 Single Element a.c. circuits

Video 727

<https://www.khanacademy.org/science/electrical-engineering/ee-circuit-analysis-topic/ee-ac-analysis/v/ee-ac-analysis-intro1>

Video 728

<https://www.khanacademy.org/science/electrical-engineering/ee-circuit-analysis-topic/ee-ac-analysis/v/ee-impedance>

Video 729

<https://www.youtube.com/watch?v=zlmwvmvijn1Y>

Video 730

<https://www.youtube.com/watch?v=MP7DDGMZCa0>

Video 731

<https://www.youtube.com/watch?v=PcdFRnmNz5o>

T4 RC and RL Series a.c. circuits

Video 732

<https://www.youtube.com/watch?v=C8o2UpqzuKI>

Video 733

<https://www.youtube.com/watch?v=BY42w4i0mKc>

Video 734

<https://www.youtube.com/watch?v=SPKUKW3RO4c>

Video 735

<https://www.youtube.com/watch?v=Ai23T-Ns5Qc>

Video 736

<https://www.youtube.com/watch?v=IYudYY4fA3c>

Video 737

https://www.youtube.com/watch?v=_A6fCgQdS2Q

Video 738

<https://www.youtube.com/watch?v=cYMrg235uYo>

Video 739

<https://www.khanacademy.org/science/electrical-engineering/ee-circuit-analysis-topic/ee-ac-analysis/v/ee-ac-analysis-intro1>

Video 740

<https://www.khanacademy.org/science/electrical-engineering/ee-circuit-analysis-topic/ee-ac-analysis/v/ee-impedance>

T5 RLC Series a.c. circuits

Video 741

<https://www.youtube.com/watch?v=C8o2UpqzuKl>

Video 742

<https://www.youtube.com/watch?v=tGMH4fCpplA>

Video 743

<https://www.youtube.com/watch?v=Puln0stOu38>

Video 744

<https://www.youtube.com/watch?v=pSCWdsFgErE>

Video 745

<https://www.youtube.com/watch?v=g7tNYXdHwz4>

Video 746

<https://www.youtube.com/watch?v=xcAjZvO35z4>

Video 747

<https://www.youtube.com/watch?v=2GvqQvohP2k>

Video 748

<https://www.khanacademy.org/science/electrical-engineering/ee-circuit-analysis-topic/ee-ac-analysis/v/ee-ac-analysis-intro1>

T6 Parallel a.c. Circuits

Video 749

<https://www.youtube.com/watch?v=PcdFRnmNz5o>

Video 750

<https://www.youtube.com/watch?v=f7En7XE7ht4>

Video 751

<https://www.youtube.com/watch?v=uxgh8H2hzn8>

Video 752

<https://www.youtube.com/watch?v=39vj1bIEMk4>

Video 753

<https://www.youtube.com/watch?v=QyowFLmeY10>

Video 754

<https://www.youtube.com/watch?v=gU2NFCIVK0I>

Video 755

<https://www.youtube.com/watch?v=T1pW0taHs1k>

T7 Power in an a.c. circuit

Video 756

<https://www.youtube.com/watch?v=lf25y4Nhwv4>

Video 757

<https://www.youtube.com/watch?v=sqi3uCFzhmA>

Video 758

<https://www.youtube.com/watch?v=zKG4JXho6FM>

Video 759

https://www.youtube.com/watch?v=FeSQ7_OWQy0

Video 760

<https://www.youtube.com/watch?v=flRocvQxQw4>

Video 761

https://www.youtube.com/watch?v=35u_XEDCrJk

Video 762

https://www.youtube.com/watch?v=_BKY2xexGWs

Video 763

<https://www.khanacademy.org/science/electrical-engineering/ee-circuit-analysis-topic/ee-ac-analysis/v/ee-impedance>

Video 764

<http://videos.mathtutordvd.com/detail/videos/ac-circuit-analysis---vol-3---real-reactive-power/video/lf25y4Nhvw4/01---instantaneous-power-in-ac-circuit-analysis-electrical-engineering>

T8 Power Factor Improvement

Video 765

<https://www.youtube.com/watch?v=k8JSmvYavyM>

Video 766

<https://www.youtube.com/watch?v=MY1PcITDTjY>

Video 767

https://www.youtube.com/watch?v=Tv_7XWf96gg

Video 768

https://www.youtube.com/watch?v=7S22cJ_aF9M

Video 769

<https://www.youtube.com/watch?v=RU6jtai4wys>

Video 770

<https://www.youtube.com/watch?v=aKUIQIFg4hw>

Video 771

<https://www.youtube.com/watch?v=ZQSVf8AknEA>

Video 772

<https://www.youtube.com/watch?v=HKz3dBUKIZs>

Video 773

<https://www.youtube.com/watch?v=bAVU2tu1Wkg>

Video 774

<https://www.youtube.com/watch?v=DoHTzrk8suE>

T9 Harmonics and Resonance Effect in a.c. Systems

Video 775

<https://www.khanacademy.org/science/electrical-engineering/ee-circuit-analysis-topic/ee-ac-analysis/v/ee-ac-analysis-intro1>

Video 776

<https://www.youtube.com/watch?v=vkh8Jfmm3hk>

Video 777

<https://www.youtube.com/watch?v=jIGITBoN2VY>

Video 778

<https://www.khanacademy.org/science/physics/mechanical-waves-and-sound/simple-harmonic-motion-with-calculus/v/introduction-to-harmonic-motion>

Video 779

<https://www.youtube.com/watch?v=IAIzNXU0FJw>

Video 780

<https://www.youtube.com/watch?v=APE0w1kff2M>

T10 Three Phase Systems

Video 781

<https://www.youtube.com/watch?v=RT0XdTYQteo>

Video 782

<https://www.youtube.com/watch?v=qthuFLNSrlg>

Video 783

<https://www.youtube.com/watch?v=4oRT7PoXSS0>

Video 784

<https://www.youtube.com/watch?v=eWzwV9lkYMw>

Video 785

<https://www.youtube.com/watch?v=MHWm1C1zUz4>

Video 786

<https://www.youtube.com/watch?v=83IVK6i8EB0>

Video 787

<https://www.youtube.com/watch?v=QQRmV2wluHY>

Video 788

https://www.youtube.com/watch?v=k_FqhE0uNEU

Video 789

https://www.youtube.com/watch?v=310jd_DxH2s

T11 Three phase star-connections

Video 790

<https://www.youtube.com/watch?v=aS5bkOMZRIs>

Video 791

<https://www.youtube.com/watch?v=-PuVmOLr5K8>

Video 792

<https://www.youtube.com/watch?v=P-mXM1Gvn4g>

Video 793

https://www.youtube.com/watch?v=eq6Ecj-y_Qw

Video 794

<https://www.youtube.com/watch?v=FPT-1R7NmP8>

Video 795

<https://www.youtube.com/watch?v=mPEAnG3bIFk>

Video 796

<https://www.youtube.com/watch?v=sdKJYVtOaQc>

Video 797

https://www.youtube.com/watch?v=A0E_A0COZ8w

T12 Three phase four wire systems

Video 798

<https://www.youtube.com/watch?v=OtQnk30Ghow>

Video 799

<https://www.youtube.com/watch?v=K8lr1-COjnc>

Video 800

<https://www.youtube.com/watch?v=qthuFLNSrlg>

Video 801

<https://www.youtube.com/watch?v=RToXdTYQteo>

Video 802

<https://www.youtube.com/watch?v=8-npuxsLNEU>

Video 803

<https://www.youtube.com/watch?v=4oRT7PoXSSO>

Video 804

<https://www.youtube.com/watch?v=BfanFfOQnLg>

Video 805

<https://www.youtube.com/watch?v=eWzwV9lkYMw>

Video 806

<https://www.youtube.com/watch?v=BVD3wxfvf-4>

Video 807

<https://www.youtube.com/watch?v=83IVK6i8EB0>

T13 Three phase delta-connections and Interconnected systems

Video 808

<https://www.youtube.com/watch?v=xjSQ9VI9A4Y>

Video 809

<https://www.youtube.com/watch?v=qk-HOPXPMN0>

Video 810

<https://www.youtube.com/watch?v=jRq3ULJuolY>

Video 811

<https://www.youtube.com/watch?v=WCwtBIBPpCc>

Video 812

<https://www.youtube.com/watch?v=3N-oLzEU1UM>

Video 813

<https://www.youtube.com/watch?v=-PuVmOLr5K8>

Video 814

https://www.youtube.com/watch?v=A0E_A0COZ8w

Video 815

<https://www.youtube.com/watch?v=QmyNPfRbCnc>

Video 816

<https://www.youtube.com/watch?v=sdKJYVtOaQc>

T14 Energy and power requirements of a.c. systems

Video 817

<https://www.khanacademy.org/science/ap-physics-1/ap-circuits-topic/introduction-to-dc-circuits-ap/v/electric-power>

Video 818

<https://www.youtube.com/watch?v=5kfwlbepods>

Video 819

https://www.youtube.com/watch?v=310jd_DxH2s

Video 820

<https://www.youtube.com/watch?v=iMn7dq7B1oo>

Video 821

<https://www.youtube.com/watch?v=VSpB3HivkhY>

T15 Fault Loop Impedance

Video 822

https://www.youtube.com/watch?v=_twVvsGo81A

Video 823

<https://www.youtube.com/watch?v=F3rw1KwFboQ>

Video 824

<https://www.youtube.com/watch?v=79rT9SrWXRy>

Video 825

<https://www.youtube.com/watch?v=Ksg2zQLuiAs>

Video 826

<https://www.youtube.com/watch?v=bWqNCkoZSCs>

Video 827

<https://www.youtube.com/watch?v=NJj1DM3APIA>

Video 828

<https://www.youtube.com/watch?v=cF6zA0EHCwc>

Video 829

<https://www.youtube.com/watch?v=IRwj9Y496Qc>

Video 830

<https://www.youtube.com/watch?v=kJiaQRVpSIo>

Video 831

https://www.youtube.com/watch?v=vtZpe4_Go78

AC Circuits

G102	Alternating Current Principle
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G002+G102

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[www.highlightcomputer.com/Video Lessons.pdf](http://www.highlightcomputer.com/Video%20Lessons.pdf)

Basic single phase and three phases circuits

[G102 Lesson 1 Sine wave and it's values.zip](#)

Video 832

http://youtu.be/cvwNfp_oO18

[G102_Lesson_2_AC_RL+RC_Series_circuits.zip](#)

Video 833

http://youtu.be/VZMR4_6OIF4

[G002 Lesson 3 AC Series RLC circuits.zip](#)

Video 834

<http://youtu.be/sfhmoYce2ug>

[G102 Lesson 4 AC Parallel circuits.zip](#)

Video 835

http://youtu.be/e-awv_8v5m8

[G102 Lesson 5 Three phase circuit basics.zip](#)

Video 836

<http://youtu.be/vRsHUF4vD5s>

[G102 Lesson 6 Balanced three phase circuit.zip](#)

Video 837

<http://youtu.be/jrwVD59QV4s>

The links contain the following lessons

G102 Lesson 1 Sine wave and it's values

G102 Lesson 2 AC RL+RC Series circuits

G102 Lesson 3 AC Series RLC circuits

G102 Lesson 4 AC Parallel circuits
G102 Lesson 5 Three phase circuit basics
G102 Lesson 6 Balanced three phase circuit
Video 838

<http://youtu.be/m0dN0Wp6LCI>

Video 839

<http://youtu.be/gTjcE8ssull>

Video 840

<http://youtu.be/LqRybJxm0tE>

Video 841

<http://youtu.be/brn-HHfKSXM>

Video 842

<http://youtu.be/brn-HHfKSXM>

Video 843

<http://youtu.be/7SPxjr1DSFE>

Video 844

http://youtu.be/e-awv_8v5m8

Video 845

<http://youtu.be/vRsHUF4vD5s>

Video 846

<http://youtu.be/irwVD59QV4s>

G101+G102+G006

[Elect Fundamental E029+G012+G001+G002+G060.zip](#)

www.highlightcomputer.com/ElectFundamentalE029G012G001G002G006Mod.zip

UEENEEG103A

• [Workbook](#)

•

• [Answers](#)

•

- T1 Standards, codes and requirements applicable to the installation of wiring systems encompassing:
 -
 - Cables and methods of mechanical protection and support
 - Video 847
 - <https://www.youtube.com/watch?v=gtAaZ2hFYTA>
 - Video 848
 -
 - https://www.youtube.com/watch?v=__AApboO3aj0
 - Video 849

<https://www.youtube.com/watch?v=jBG8YI1C8G4>

Video 850

<https://www.youtube.com/watch?v=-AlsJlbu7Sc>

- Protection against and from other services.
- Video 851
- <https://www.youtube.com/watch?v=7cvgn0KqCCc>
- Video 852

<https://www.youtube.com/watch?v=uwFvGZcjQME>

- Video 853

https://www.youtube.com/watch?v=6EiIDNEiB_U

-
- Prohibited cable locations
- Video 854
- <https://www.youtube.com/watch?v=gCKOAnnSb3c>
- Video 855

<https://www.youtube.com/watch?v=nUYIuz08ozo>

- Building codes affecting the installation of cables in buildings, structures and premises (limitation on penetration of structural elements, maintenance of fire protection integrity, and wiring above suspected ceilings)
- Video 856
- <https://www.youtube.com/watch?v=9qyjYYepeeI>
- Video 857

<https://www.youtube.com/watch?v=AihLEEHsOOA>

- Video 858

<https://www.youtube.com/watch?v=TBvhJONb4QE>

- Video 859

<https://www.youtube.com/watch?v=oNXc1bQVdKE>

- Video 860

<https://www.youtube.com/watch?v=4kT5pbASuGA>

- Video 861

<https://www.youtube.com/watch?v=c-ZONYK5PHs>

- Video 862

<https://www.youtube.com/watch?v=hzwUWVKMDko>

- Video 863

<https://www.youtube.com/watch?v=HTkaBBj2rr4>

- Video 864

<https://www.youtube.com/watch?v=YDysQJy7xiM>

- Issues affecting electrical installations in heritage buildings and premises (limitation on penetration of structural and finished elements, accessing cable routes, types and colour of exposed accessories).

- Video 865

- <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Heritage/how-to-carry-out-work-on-heritage-buildings-and-sites.pdf>

- Video 866

- <https://www.khanacademy.org/computing/computer-science/computers-and-internet-code-org/internet-works-intro/v/the-internet-wires-cables-and-wifi>

- Video 867

<https://www.youtube.com/watch?v=jBG8YI1C8G4>

- Video 868

<https://www.youtube.com/watch?v=JESQEXxDnYQ>

T2 Use of other installation standards called up by the Wiring Rules for special situations encompassing:

- standards that apply to Electromedical treatment areas.
- Video 869

- <https://www.youtube.com/watch?v=A9xwNq82Ns4>
- Video 870

- <https://www.youtube.com/watch?v=rGpI1Yu2I1o>
- Video 871

- <https://www.youtube.com/watch?v=TmDc1KnH3Bo>
- additional requirements for construction and demolition sites.

- Video 872

- <https://www.safework.nsw.gov.au/resource-library/construction/electrical-services/electrical-practices-construction-and-demolition-sites-fact-sheet>

- Relocatable installations and their site supply
- Video 873
- <https://www.youtube.com/watch?v=a4qIoKGWL3E>
- Video 874

- <https://www.youtube.com/watch?v=2B7lgMVvsfM>
- additional requirements for caravan park.
- Video 875
- <https://www.youtube.com/watch?v=cN19KHYwZ78>
- Video 876

- <https://www.youtube.com/watch?v=A7Umxjx12Wo>
- Video 877

- https://www.youtube.com/watch?v=oOQHe_cZtI4

- additional requirements for marinas and pleasure craft at low voltage.
- Video 878
- <https://www.youtube.com/watch?v=yDhCfj5-0u8>
- Video 879

- <https://www.youtube.com/watch?v=OQvaOy3ZLJY>
- Video 880

- <https://www.youtube.com/watch?v=fHZtYFH-0Pc>
- Video 881

- https://www.youtube.com/watch?v=tdur_Ln-9cE

- Video 882

<https://www.youtube.com/watch?v=0WqUbSQ9byE>

- additional requirements for shows and carnivals.

- Video 883

https://www.sa.gov.au/__data/assets/pdf_file/0008/269144/161213-Electrical-safety-at-festivals-and-events-A5.pdf

T3 Hazardous areas

- Video 884

<https://www.youtube.com/watch?v=wA0XCBblRuc>

- Video 885

<https://www.youtube.com/watch?v=hqCFMJcpfcs>

- Video 886

<https://www.youtube.com/watch?v=erimPg8VNVE>

- Video 887

<https://www.youtube.com/watch?v=TByewSeYS9M>

- Video 888

<https://www.youtube.com/watch?v=UEfmWco9BZE>

- Video 889

<https://www.youtube.com/watch?v=iAofAJPm7sM>

- Video 890

<https://www.youtube.com/watch?v=fXZXKs-z5Yk>

Video 891

<https://www.youtube.com/watch?v=4cYYzsBZDLE>

Video 892

<https://www.youtube.com/watch?v=prXtKchQyPE>

T4 Requirement for the installation of cables and accessories in damp situations and ELV installations encompassing:

Video 893

<https://www.youtube.com/watch?v=iloWEUi1orw>

Video 894

<https://www.youtube.com/watch?v=o8lyyNiAG8k>

Video 895

<https://www.youtube.com/watch?v=UmOlvKw1LwM>

Video 896

<https://www.youtube.com/watch?v=pIPzdu99rp4>

- restricted zones around baths, showers, fixed water containers, pools, sauna heaters and fountains/water features for given installations.
- selecting equipment suitable for installation in given damp situations.
- Video 897
- <https://www.electriciantalk.com/f2/damp-situation-questions-help-130026/>
-
- voltage range that defines extra-low voltage.
- 'Separated extra-low voltage (SELV) system' and a 'Protected extra-low voltage (PELV) system'.
- AS/NZS 3000 requirements for selecting extra-low voltage systems and devices for a range of installations and conditions.
- Video 898

<https://www.youtube.com/watch?v=fdxE8bl8Kmo>

Video 899

https://www.youtube.com/watch?v=4UxH2_5FYBo

Video 900

<https://www.youtube.com/watch?v=Cky6B5TZ4Gg>

Video 901

<https://www.youtube.com/watch?v=69yGw6etzHs>

Video 902

<https://www.youtube.com/watch?v=qE2LmU2NYNk>

Video 903

<https://www.youtube.com/watch?v=p3qyrDvYgqk>

T5 Aerial cabling

Video 904

<https://www.youtube.com/watch?v=fUXH6ThCqq0>

Video 905

<https://www.youtube.com/watch?v=aUEERq6wpFI>

Video 906

<https://www.youtube.com/watch?v=UNocIu6CS6Q>

Video 907

<https://www.youtube.com/watch?v=To1RAv02ZnY>

Video 908

<https://www.youtube.com/watch?v=aF44igvt-fo>

Video 909

<https://www.youtube.com/watch?v=hw2Zpy1rWto>

Video 910

https://www.youtube.com/watch?v=2k_Ru8AK3_Q

Video 911

https://www.youtube.com/watch?v=_pYuSlFrzX8

Video 912

<https://www.youtube.com/watch?v=ZsJ228Nrong>

Video 913

<https://www.youtube.com/watch?v=7ZiETnuidmc>

Video 914

<https://www.youtube.com/watch?v=zCgUnNC860E>

Video 915

<https://www.youtube.com/watch?v=yBiQrsvtFk0>

Video 916

<https://www.youtube.com/watch?v=pi-F5dNIB5M&vl=en>

T6 Underground cabling

Video 917

<https://www.youtube.com/watch?v=u0jAVR-j60o>

Video 918

<https://www.youtube.com/watch?v=1Ym2OviN0XM>

Video 919

<https://www.youtube.com/watch?v=VXiP1w0aodk>

Video 920

<https://www.youtube.com/watch?v=zWhDanEcMwM>

Video 921

<https://www.youtube.com/watch?v=5by4UPxcKZQ>

Video 922

<https://www.youtube.com/watch?v=fHOfegdLfY>

Video 923

https://www.youtube.com/watch?v=vJeJvk_0Exc

Video 924

<https://www.youtube.com/watch?v=-qBSgJgUcSE>

Video 925

<https://www.youtube.com/watch?v=Od0k9nqtoCM>

T7 Techniques for installing cables and wiring systems encompassing:

- Typical cable routes through buildings, structures and premises.
- Application of wiring accessories
- Drawing-in, placing and fixing of cables
- Cable and conductor terminations
- Maintaining fire rating integrity.

Inspecting and testing installed and terminated cables to ensure they comply with continuity and insulation resistance and are safe to connect to the supply.

Video 926

<https://www.youtube.com/watch?v=hKtedrJKyQs>

Video 927

<https://www.youtube.com/watch?v=9uMIQycxygQ>

Video 928

<https://www.youtube.com/watch?v=hKtedrJKyQs>

Video 929

<https://www.youtube.com/watch?v=Ax5zHTFaRTE>

Video 930

<https://www.youtube.com/watch?v=5KezCTg0JMk>

Video 931

<https://www.youtube.com/watch?v=cIBH5TSD4G4>

Video 932

<https://www.youtube.com/watch?v=-1p5gbBNsdl>

Video 933

<https://www.youtube.com/watch?v=JESQEXxDnYQ>

Video 934

<https://www.youtube.com/watch?v=EsZ1jsFsoek>

Video 935

<https://www.youtube.com/watch?v=JLFenhhDQ2M>

Video 936

<https://www.youtube.com/watch?v=45UUd-EEcHA>

Video 937

<https://www.youtube.com/watch?v=Sc85KA6HmzM>

Video 938

<https://www.youtube.com/watch?v=HedRGM5zR7Q>

Video 939

<https://www.youtube.com/watch?v=izXgsdJXXcU>

Video 940

<https://www.youtube.com/watch?v=aTtEz1XaiHw>

Video 941

<https://www.youtube.com/watch?v=r3AyG8R5ce4>

Video 942

https://www.youtube.com/watch?v=E_t0cbxZoHs

Video 943

<https://www.youtube.com/watch?v=-985eGO7jyw>

Video 944

https://www.youtube.com/watch?v=5m-0w3gar_I

Video 945

<https://www.youtube.com/watch?v=kjSGCSwNuAg>

UEENEEG104A Install appliances, switchgear and associated accessories for low voltage electrical installations

KS01-EG104A

Installation of appliances, switchgear and accessories

accessories

T1 Installation standards, codes and requirements applicable to installing electrical equipment encompassing.

- Protection against thermal effects
- Video 946

https://www.youtube.com/watch?v=qbnl1pz_nFA

Video 947

<https://www.youtube.com/watch?v=Q1UrDshiZfl>

Video 948

<https://www.youtube.com/watch?v=f55CeHKvRtY>

Video 949

<https://www.youtube.com/watch?v=fJbJbKyX8Xs>

Video 950

<https://www.youtube.com/watch?v=odWOK8TaJEw>

Video 951

https://www.youtube.com/watch?v=W0_1xRqT8uU

Video 952

<https://www.youtube.com/watch?v=dvp8B3Q9OTA>

- Connection of electrical equipment (appliances, switchgear and accessories include switchgear and controlgear, switchboards, socket-outlets, lighting equipment and accessories, lamps and luminaires, smoke and fire detectors, cooking appliances, appliances producing hot water or steam, room heaters, electric heating cables for floors and ceilings, space heating, duct heaters, electricity converters, motors, transformers, capacitors, and batteries).

Switch gear

Video 953

<https://www.youtube.com/watch?v=0iAY8X6olag>

Video 954

<https://www.youtube.com/watch?v=bEK4S-W3fK0>

Video 955

<https://www.youtube.com/watch?v=YU1LTkEuy6s>

Socket outlet

Video 956

<https://www.youtube.com/watch?v=WP0pN492heE>

Video 957

<https://www.youtube.com/watch?v=03UsUCDmepM>

Video 958

<https://www.youtube.com/watch?v=MgTutEYCCZs>

Video 959

<https://www.youtube.com/watch?v=LU7q4EE3svE>

Video 960

<https://www.youtube.com/watch?v=NxMfP5Kxc0w>

Video 961

<https://www.youtube.com/watch?v=WERqtFfgcyo>

Video 962

<https://www.youtube.com/watch?v=KYyGpte8QY0>

Light

Video 963

https://www.youtube.com/watch?v=IabXQ_v9JX8

Video 964

<https://www.youtube.com/watch?v=KFhty6SA13c>

Video 965

<https://www.youtube.com/watch?v=eZ5hpcn6tIM>

Fire detector

Video 966

https://www.youtube.com/watch?v=Xr_loR1BZSg

Video 967

<https://www.youtube.com/watch?v=cVjyDgFrb2g>

Video 968

https://www.youtube.com/watch?v=_u1MeWNMqf4

Video 969

<https://www.youtube.com/watch?v=N6MpF8mTxtA>

Video 970

<https://www.youtube.com/watch?v=Kpof3brkuyc>

Video 971

<https://www.youtube.com/watch?v=a8ifGXs0yV0>

Video 972

<https://www.youtube.com/watch?v=zedif0N1dfs>

Cooking Appliances

Video 973

<https://www.youtube.com/watch?v=Qif9psHqymY>

Video 974

<https://www.youtube.com/watch?v=ef41pq5xlsc>

Video 975

<https://www.youtube.com/watch?v=7PZXHAzNfVs>

Video 976

<https://www.youtube.com/watch?v=zzEuuBZXdsU>

Electric heating cable

Video 977

<https://www.youtube.com/watch?v=LefjL.fJZGI>

Video 978

<https://www.youtube.com/watch?v=Oli24QNyDHM>

Video 979

<https://www.youtube.com/watch?v=cB1iGPSP-aU>

Video 980

<https://www.youtube.com/watch?v=PAmF2NkoTfg>

Video 981

<https://www.youtube.com/watch?v=Ma79pbJdPqs>

Video 982

https://www.youtube.com/watch?v=lk_BshyZ7QQ

Video 983

<https://www.youtube.com/watch?v=AFaVGKu3FWY>

Video 984

<https://www.youtube.com/watch?v=pGaZSFJpmM0>

Video 985

<https://www.youtube.com/watch?v=aGYZ8JuRfb0>

Electricity converters

Video 986

<https://www.youtube.com/watch?v=WP0pN492heE>

Video 987

<https://www.youtube.com/watch?v=k9tR9d3DsqY>

Video 988

<https://www.youtube.com/watch?v=PB0OvFtGmSg>

Video 989

https://www.youtube.com/watch?v=9kyZzmmN__0

Motor

Video 990

https://www.youtube.com/watch?v=tr1bR93_UOU

Transformer

Video 991

<https://www.youtube.com/watch?v=Dze8TWMFCYg>

Video 992

https://www.youtube.com/watch?v=oUWEXQ_GEGU

Video 993

<https://www.youtube.com/watch?v=gMqLg3OIJDU>

Video 994

<https://www.youtube.com/watch?v=6NqGkSr-nqA>

Capacitor bank

Video 995

<https://www.youtube.com/watch?v=A7LlvYwdRUs>

Battery

Video 996

<https://www.youtube.com/watch?v=yJP3BED15ko>

Video 997

https://www.youtube.com/watch?v=_QlbwvEgrCI

Video 998

https://www.youtube.com/watch?v=qmH_N4lvppU

Video 999

<https://www.youtube.com/watch?v=Z9c1hVXBggk>

Video 1000

<https://www.youtube.com/watch?v=auhfl1zWBco>

Video 1001

<https://www.youtube.com/watch?v=g30jUUWUI74>

- Required and permitted locations current-using equipment and accessories
- Control, switching and over current and RCD protection

RCD

Video 1002

<https://www.youtube.com/watch?v=iETEHRFjh2M>

Video 1003

https://www.youtube.com/watch?v=3TQvxQ_GF0c

Video 1004

<https://www.youtube.com/watch?v=mYapRr7ujzM>

Video 1005

<https://www.youtube.com/watch?v=q9OqAaZ1PMI>

Video 1006

https://www.youtube.com/watch?v=l2LtFGdes_s

Video 1007

https://www.youtube.com/watch?v=Ei_M3cmX8XU

Video 1008

<https://www.youtube.com/watch?v=CL1zIVWvr9g>

T2 Terminal configuration for connection of phase, neutral and protective earthing conductors for each type of equipment.

Video 1009

https://www.youtube.com/watch?v=zLW_7TPf310

Video 1010

<https://www.youtube.com/watch?v=cMzevUC4sao>

Video 1011

<https://www.youtube.com/watch?v=JRHypouJPzE>

Video 1012

<https://www.youtube.com/watch?v=i22OiHyWeUg>

Video 1013

<https://www.youtube.com/watch?v=Ek1u2RjQffU>

Video 1014

<https://www.youtube.com/watch?v=AZenZfLQQgw>

Video 1015

<https://www.youtube.com/watch?v=fRhofcMyAyk>

Video 1016

<https://www.youtube.com/watch?v=P-W42tk-fWc>

Video 1017

<https://www.youtube.com/watch?v=gqe86OYvNuc>

T3 Building codes affecting the installation of current-using equipment and accessories in buildings, structures and premises encompassing:

- maintenance of fire protection integrity, requirements for emergency services (safety services) and the like.

- Video 1018

<https://www.youtube.com/watch?v=J3WMspCCp-E>

Video 1019

<https://www.youtube.com/watch?v=Kk358ZZa8pk>

Video 1020

<https://www.youtube.com/watch?v=sYNqjmCe6MU>

T4 Issues affecting electrical installations in heritage buildings and premises encompassing:

limitation on types and colour of exposed accessories.

As per G103 T1

UEENEEG106A

Workbook

Answer

Video

UEENEEG106A

Section 1 Cable Type Termination

Video 1021

<https://www.youtube.com/watch?v=5mCAzyaw6CA>

Video 1022

https://www.youtube.com/watch?v=E_t0cbxZoHs

Video 1023

<https://www.youtube.com/watch?v=98tjpKHDgSM>

Section 2 Cords, cables and plugs

Video 1024

<https://www.youtube.com/watch?v=zAjFJqLX28c>

Video 1025

<https://www.youtube.com/watch?v=HHEU9ZqydGc>

Video 1026

https://www.youtube.com/watch?v=Ai_bLzl3Hq8

Video 1027

<https://www.youtube.com/watch?v=NLJumQsVyRw>

Video 1028

<https://www.youtube.com/watch?v=LogsUzATLn8>

Video 1029

<https://www.youtube.com/watch?v=PvHhJJuzWws>

Video 1030

<https://www.youtube.com/watch?v=siwBnw6aj00>

Section 3 Flat TPS wiring systems

Video 1031

<https://www.youtube.com/watch?v=v6eQVERhXtE>

Video 1032

<https://www.youtube.com/watch?v=9uMIQyexygQ>

Section 4 Circular TPS wiring systems

Video 1033

https://www.youtube.com/watch?v=_AApboO3aj0

Section 5 Thermoplastic insulated cables in non-metallic enclosures

Video 1034

<https://www.youtube.com/watch?v=zezFk6Z4Wz8>

Video 1035

https://www.youtube.com/watch?v=3kSAkKJ_1F8

Video 1036

<https://www.youtube.com/watch?v=m5GsI0KuokQ>

Video 1037

<https://www.youtube.com/watch?v=XWfCAdrfkg0>

Video 1038

https://www.youtube.com/watch?v=N4Ro-qb_V9g

Video 1039

<https://www.youtube.com/watch?v=B2F4jXOLdDk>

Section 6 Thermoplastic insulated cables in metallic enclosures

Video 1040

<https://www.youtube.com/watch?v=3hyN3NOmqGo>

Video 1041

<https://www.youtube.com/watch?v=XWfCAdrfkG0>

Video 1042

https://youtu.be/ko3p6_8bfYw

Section 7 Fire protection cabling and systems

Video 1043

<https://www.youtube.com/watch?v=HTkaBBj2rr4>

Video 1044

<https://www.youtube.com/watch?v=mHinp2d4bkY>

Video 1045

<https://www.youtube.com/watch?v=r9rYx107sO8>

Video 1046

<https://www.youtube.com/watch?v=5ebDzGq54yk>

Video 1047

<https://www.youtube.com/watch?v=5ebDzGq54yk>

Video 1048

<https://www.youtube.com/watch?v=hzwUWVKMDko>

Video 1049

<https://www.youtube.com/watch?v=iLQtTiG7pNA>

Video 1050

https://www.youtube.com/watch?v=_u1MeWNMqf4

<https://www.youtube.com/watch?v=TBvhJONb4QE>

Section 8 Steel wire armoured (SWA) cables

Video 1051

<https://www.youtube.com/watch?v=5XST0DkotYw>

Video 1052

<https://www.youtube.com/watch?v=WQuoQvppvRQ>

Video 1053

<https://www.youtube.com/watch?v=XN4FFEekGJU>

Video 1054

https://www.youtube.com/watch?v=2_ZZS_YyOKg

Video 1055

<https://www.youtube.com/watch?v=lnpGTrsqhEk>

Video 1056

<https://www.youtube.com/watch?v=zp6jlyMSkc>

Video 1057

<https://www.youtube.com/watch?v=iPgggKZk304>

Section 9 Trailing cables and catenary systems

Video 1058

<https://www.youtube.com/watch?v=wu63J4KMwWE>

Video 1059

<https://www.youtube.com/watch?v=zCgUnNC860E>

Video 1060

<https://www.youtube.com/watch?v=4iEtC-mhKrs>

Video 1061

<https://www.youtube.com/watch?v=O2MCBzw6kVg>

Video 1062

<https://www.youtube.com/watch?v=VeUrCerDssM>

Video 1063

<https://www.youtube.com/watch?v=3Lt8Qy-b3iQ>

UENEEG107A

[Workbook](#)

[Answer 1](#)

[Answer 2](#)

www.ueeneeg107a.blogspot.com

AS3000

Video 1064

<https://www.youtube.com/watch?v=TBvRI5FwUJO>

Vd

Video 1065

<https://www.youtube.com/watch?v=hPHLxi9qBH8>

- See www.ueeneeg107a.blogspot.com

to view the videos

T1 Performance requirements - design and safety encompassing:

- harmful effects against which the design of an electrical installation must provide protection.

Video 1066

- <https://www.youtube.com/watch?v=fR0EGCfC3rg>

Video 1067

- <https://www.youtube.com/watch?v=igK-DRB5faU>

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- performance standards of a correctly functioning electrical installation.

- supply characteristics that shall be considered when designing an electrical installation.

Video 1068

<https://www.youtube.com/watch?v=cWkLgkqMVfY>

Video 1069

<https://www.youtube.com/watch?v=AZenZfLQQgw>

- acceptable methods for determining the maximum demand in consumer's mains and sub-mains.

Video 1070

<https://www.youtube.com/watch?v=Wq0uODypaGI>

Video 1071

<https://www.youtube.com/watch?v=WdIMjnbx34A>

Video 1072

<https://www.youtube.com/watch?v=AOctHaAxEoM>

Video 1073

<https://www.youtube.com/watch?v=KBvyX80Pdec>

Video 1074

<https://www.youtube.com/watch?v=edO3qb0RtiU>

Video 1075

<https://www.youtube.com/watch?v=AUDIE6aAtI>

- AS/NZS 3000 requirements limiting voltage drop in an installation

Video 1076.

<https://www.youtube.com/watch?v=hPHLxi9qBH8>

Video 1077

<https://www.youtube.com/watch?v=f1NNHgXHiBw>

Video 1078

<https://www.youtube.com/watch?v=VOR0R9BXoHc>

Video 1079

<https://www.youtube.com/watch?v=ggKnH-95ty0>

Video 1080

<https://www.youtube.com/watch?v=TcAyFuPKssw>

Video 1081

<https://www.youtube.com/watch?v=h1FzMvnJmZ4>

Video 1082

<https://www.youtube.com/watch?v=AOctHaAxEOm>

Video 1083

https://www.youtube.com/watch?v=8fn0Rg_YC7w

Video 1084

<https://www.youtube.com/watch?v=Wq0uODypaGI>

Video 1085

<http://ipdgroup.com.au/ipdwc/VoltageDrop.aspx>

- reason for dividing electrical installations into circuits and the factors that shall determine their number and type.

Video 1086

- https://www.youtube.com/watch?v=W0_1xRqT8uU

Video 1087

- https://www.youtube.com/watch?v=d1jh2ig_5xU

Video 1088

- https://www.youtube.com/watch?v=pe82jZgmW_0

Video 1089

- <https://www.youtube.com/watch?v=n-BpmdWNyZM>

Video 1090

- <https://www.youtube.com/watch?v=JmwL-3rhgwY>

Video 1091

- <https://www.youtube.com/watch?v=9uMIQycxygQ>

Video 1092

- <https://www.youtube.com/watch?v=OUgPCiDoND0>

-

- typical external factors that may damage an electrical installation and that shall be considered in the installation design.

Video 1093

- <https://www.youtube.com/watch?v=t7DdDEYz4a4>

Video 1094

- <https://www.youtube.com/watch?v=CGvOheMLsrA>

Video 1095

- <https://www.youtube.com/watch?v=Y0S5Ckba9n4>

Video 1096

- <https://www.youtube.com/watch?v=rpQwhiS-ooY>

Video 1097

- <https://www.youtube.com/watch?v=NfRuLITp5s8>

Video 1098

-

- <https://www.youtube.com/watch?v=fvkc79jTHRA>

Video 1099

- <https://www.youtube.com/watch?v=fJbJbKyX8Xs>

Video 1100

- <https://www.youtube.com/watch?v=L2j5Qr0w4io>

Video 1101

- https://www.youtube.com/watch?v=sCXRDpKV_JQ

Video 1102

- <https://www.youtube.com/watch?v=DLWnN7xaXn8>

-

- methods for protecting persons and livestock against direct and indirect contact with conductive parts and the typical application of each.

Video 1103

- <https://www.youtube.com/watch?v=gUiEOItGyI>

Video 1104

- <https://www.youtube.com/watch?v=KIKiWk4Bb5Y>

Video 1105

- <https://www.youtube.com/watch?v=fMt4yasO4WE>

Video 1106

- <https://www.youtube.com/watch?v=BUmvA9SHXjw>

Video 1107

- <https://www.youtube.com/watch?v=fxW1DT5Pk7Y>

Video 1108

- <https://www.youtube.com/watch?v=ZfaQENB9oWg>

Video 1109

- <https://www.youtube.com/watch?v=aS7zqgSXYIk>

Video 1110

- https://www.youtube.com/watch?v=ZY-WdRC_orU

Video 1111

- <https://www.youtube.com/watch?v=zXHTtJjsVQY>

Video 1112

- <https://www.youtube.com/watch?v=ALvKGUwvSbc>

-

- acceptable methods of protection against the risks of ignition of flammable materials and injury by burns from the thermal effects of current, in normal service.

Video 113

- <https://www.atlantictraining.com/shop/training-video-how-to-handle-flammable-materials-safely>

Video 1114

- <https://www.youtube.com/watch?v=CaDK26g9PxA>

Video 1115

- <https://www.atlantictraining.com/shop/training-video-what-are-the-flammable-materials-in-the-workplace>

Video 1116

- <https://www.youtube.com/watch?v=K-T3yCYRa1s>

Video 1117

- https://www.youtube.com/watch?v=1BY_S9Kctdw

-

- likely sources of unwanted voltages and the methods for dealing with this potential hazard.

Video 1118

- <https://www.youtube.com/watch?v=wal2KP1bbIY>

Video 1119

- <https://www.youtube.com/watch?v=igK-DRB5faU>

Video 1120

- <https://www.youtube.com/watch?v=SYIqVLw79kc>

Video 1121

- <https://www.youtube.com/watch?v=Pr9YntO7V1U>

Video 1122

- <https://www.youtube.com/watch?v=AOgkxPmSYJk>

-

- acceptable methods for protecting persons and livestock against injury and property against damage from the effects of over current.

Video 1123

- https://www.youtube.com/watch?v=wI16y_DhTTg

Video 1124

- https://www.youtube.com/watch?v=303_8rvMgAg

Video 1125

- https://www.youtube.com/watch?v=nkPB_8qrEXw

-

- requirement for protection against fault current.

Video 1126

- <https://www.youtube.com/watch?v=yUbehZunDlc>

Video 1127

- https://www.youtube.com/watch?v=seyuW_fNbNc

Video 1128

- <https://www.youtube.com/watch?v=jBULGNO4SnU>

Video 1129

- <https://www.youtube.com/watch?v=fR0EGCfc3rg>

Video 1130

- <https://www.youtube.com/watch?v=phH0fFVK-AU>

Video 1131

- <https://www.youtube.com/watch?v=G9W11B8sS1E>

Video 1132

- <https://www.youtube.com/watch?v=2HFBSQ-BGRI>

-

- requirement for protection against the harmful effects of faults between live parts of circuits supplied at different voltages.

Video 1133

- https://www.youtube.com/watch?v=zLW_7TPf310

Video 1134

- <https://www.youtube.com/watch?v=VI3tvO51RTI>

-

- need for protection against injury from mechanical movement and how this may be achieved.

Video 1135

- <https://www.youtube.com/watch?v=JlBhgpsBtw8>

Video 1136

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- <https://www.youtube.com/watch?v=GwlW-ZnvDt0>

Video 1137

- <https://www.youtube.com/watch?v=fKgM82ydSxA>

-

- features of 'fire rated construction' and how the integrity of the fire rating can be maintained in relation to electrical installation.

Video 1138

- <https://www.youtube.com/watch?v=JjnUThQIdbY>

Video 1139

- <https://www.youtube.com/watch?v=MRVTX4ZvcC8>

Video 1140

- https://www.youtube.com/watch?v=R5G3_80CiC0

Video 1141

- <https://www.youtube.com/watch?v=vW5H8ab-OfA>

Video 1142

- <https://www.youtube.com/watch?v=t25s8VDJCng>

Video 1143

- <https://www.youtube.com/watch?v=UuTowptYlrM>

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T2 Final subcircuit arrangements encompassing:

- factors that shall be considered in determining the number and type of circuits required for an installation.
- daily and seasonal demand for lighting, power, heating and other loads in a given installation.
- number and types of circuits required on a particular installation.

- current requirements for given final subcircuits.
- layout/schedule of circuits for given installations.

Video 1144

- <https://www.youtube.com/watch?v=nD7g-dyYn3w>

Video 1145

- <https://www.youtube.com/watch?v=KrkJIAHy6pc>

Video 1146

- <https://www.youtube.com/watch?v=AZenZfLQQgw>

Video 1147

- https://www.youtube.com/watch?v=TQOt_1awk9s

Video 1148

- https://www.youtube.com/watch?v=_twVvsGo81A

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T3 Factors affecting the suitability of wiring systems encompassing:

- wiring systems typically used with various construction methods and particular environments.

Video 1149

- <https://www.youtube.com/watch?v=A5P-buWX-dA>

Video 1150

- <https://www.youtube.com/watch?v=-AlsJbu7Sc>

Video 1152

-
- <https://www.youtube.com/watch?v=hKtedrJKyQs>

Video 1153

- <https://www.youtube.com/watch?v=n-BpmdWNYZM>

Video 1154

- <https://www.youtube.com/watch?v=Z2EZAgcdwaU>

Video 1155

- <https://www.youtube.com/watch?v=5KezCTg0JMK>

Video 1156

- <https://www.youtube.com/watch?v=A5P-buWX-dA>

-

- installation conditions that may affect the current-carrying capacity of cables.

Video 1157

- <https://www.youtube.com/watch?v=trjobAF5Q9Y>

Video 1158

- <https://www.youtube.com/watch?v=9ZpbhPXujt4>

Video 1159

- <https://www.youtube.com/watch?v=AOctHaAxEoM>

Video 1160

- <https://www.youtube.com/watch?v=2Awciz5iHE0>

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- external influences that may affect the current-carrying capacity and/or may cause damage to the wiring system

Video 1161

- <https://www.youtube.com/watch?v=KBvyX80Pdec>

Video 1162

- <https://www.youtube.com/watch?v=MB5Q-dA-xKk>

Video 1163

- <https://www.youtube.com/watch?v=jQ2nD8ZGeEw>

-

- AS/NZS 3000 requirements for selecting wiring systems for a range of circuits, installation conditions and construction methods into which the wiring system is to be installed. Note: Wiring systems include cable enclosures, underground wiring, aerial wiring, catenary support, emergency systems, busbar trunking and earth sheath return.

T4 Maximum demand on consumer's mains/submains encompassing:

- acceptable methods for determining the maximum demand on an installation's consumer's mains and submains.
- maximum demand for the consumer's mains for given installations up to 400 A per phase.
- maximum demand for given submains.

Video 1164

<https://www.youtube.com/watch?v=WdIMjnbx34A>

Video 1165

<https://www.youtube.com/watch?v=Wq0uODypaGI>

Video 1166

<https://www.youtube.com/watch?v=AOctHaAxEoM>

Video 1167

<https://www.youtube.com/watch?v= dfe1YVMp0c>

T5 Cable selection based on current carrying capacity requirements encompassing:

- installation conditions for a range of wiring systems and applications.
- external influences that require the use of a derating factor.
- AS/NZS 3000 requirements for coordination of cables and protection devices.
- AS/NZS 3008 used to select conductor size based on the maximum current requirement for a given installation condition including any applicable derating factors.

Video 1169

<https://www.youtube.com/watch?v=trjobAF5Q9Y>

Video 1170

<https://www.youtube.com/watch?v=2Awciz5iHE0>

Video 1171

<https://www.youtube.com/watch?v=4n-GfMK1eQQ>

Video 1172

<https://www.youtube.com/watch?v=9ZpbhPXujt4>

Derating

Video 1173

<https://www.youtube.com/watch?v= EIXIIaSvpU>

Video 1174

<https://www.youtube.com/watch?v=miOIC9xDiGw>

Video 1175

<https://www.youtube.com/watch?v=n06qMCeySxc>

Video 1176

<https://www.youtube.com/watch?v=DMW2wFViVrc>

Video 1177

<https://www.youtube.com/watch?v=GIGcjRwz2b8>

Video 1178

<https://www.youtube.com/watch?v=j5RSccpF9SU>

Video 1179

https://www.youtube.com/watch?v=pjWz_EyCc34

T6 Cable selection based on voltage drop requirements encompassing:

- AS/NZS 3000 requirements for maximum voltage drop in an installation.
- relevant tables in AS/NZS 3008 for unit values of voltage drop.
- calculation of the expected voltage drop in a given circuit.
- selecting cables to satisfy voltage drop requirements in addition to current carrying capacity requirements.

T7 Cable selection based on fault loop impedance requirements encompassing:

- AS/NZS 3000 requirements for maximum fault loop impedance in an installation.
- relevant tables in AS/NZS 3008 to determine cable impedances.
- calculation of the expected fault loop impedance for a given circuit arrangement.
- selecting cables to satisfy fault loop impedance requirements in addition to current carrying capacity requirements and voltage drop requirements.

Video 1180

<https://www.youtube.com/watch?v=VOR0R9BXoHc>

Video 1181

<https://www.youtube.com/watch?v=trjobAF5Q9Y>

Video 1182

<https://www.youtube.com/watch?v=TcAyFuPKssw>

Video 1183

<https://www.youtube.com/watch?v=f1NNHgXHiBw>

Video 1184

<https://www.youtube.com/watch?v=AOctHaAxEoM>

Video 1185

<https://www.youtube.com/watch?v=7Ra8siokTAo>

T8 Selecting protection devices encompassing:

- acceptable methods of protection against indirect contact.
- AS/NZS 3000 requirements for selecting methods and devices to protect against indirect contact for a range of installation types and conditions.

- coordination between conductors and protection devices to ensure the protection of cables from over heating due to over current.
- possible injuries to persons and livestock from hazards due to a short circuit.
- AS/NZS 3000 requirements for selecting devices to protect against overload current for a range of circuits and loads.
- AS/NZS 3000 requirements for selecting devices to protect against short-circuit current for a range of installation conditions.
- Video 1186

https://www.youtube.com/watch?v=NCEGf1_agAM

Video 1187

https://www.youtube.com/watch?v=F_WWKCarvwQ

Video 1188

https://www.youtube.com/watch?v=qsacU_JIDHM

Video 1189

<https://www.youtube.com/watch?v=OQjHFwCYsk0>

Video 1190

<https://www.youtube.com/watch?v=bQ6fZrrP0H4>

Video 1191

<https://www.youtube.com/watch?v=6zhOFTBf1wU>

T9 Selecting devices for isolation and switching encompassing:

- requirements for the provision of the isolation of every circuit in an electrical installation.
- need for protection against mechanical movement of electrically activated equipment.
- AS/NZS 3000 requirements for selecting devices for isolation and switching for a range of installations and conditions.

Video 1192

- <https://www.youtube.com/watch?v=7UsT6qtzDDk>

Video 1193

- <https://www.youtube.com/watch?v=f4guEoibnq8>

Video 1194

- <https://www.youtube.com/watch?v=vpuis-gDki8>

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T10 Switchboards encompassing:

- AS/NZS 3000 and local supply authority requirements for switchboards.
- tariff structures for the supply of electricity.
- equipment installed at the main switchboards with capacities up to 400 A per phase.
- layout of a main switchboard for an installation supplied with single phase single tariff whole current metering.
- layout of a main switchboard for an installation supplied with single phase multiple tariff whole current metering.
- layout of a main switchboard for an installation supplied with multiphase single tariff whole current metering.
- layout of a main switchboard for an installation supplied with multiphase multiple tariff whole current metering.
- layout of a main switchboard for a multiple tenancy installation with whole current metering.
- layout of a main switchboard, including metering, for an installation supplied with three phase CT metering.
- local supply authority requirements for connection of an electrical installation to the electrical supply system

Video 1195

- <https://www.youtube.com/watch?v=PxXlyQegunQ>

Video 1196

- <https://www.youtube.com/watch?v=bJzFdoUfw0U>

Video 1197

- <https://www.youtube.com/watch?v=cGCKXtYhwd8>

Video 1198

- https://www.youtube.com/watch?v=utYxT_S1piA

Video 1199

- <https://www.facebook.com/wandmelectrical/videos/a-mechanical-services-switchboard-mssb-i-just-finished-this-one-is-going-into-a-/315308662435843/>

Evidence Guide

G033+G063+G107 Week 10 to 15

Electrical Installation

<u>G107</u>	<u>Electrical Equipments Safety Protection</u>
	<u>Electrical Installation Design</u>

G007+G107

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[www.highlightcomputer.com/Video Lessons.pdf](http://www.highlightcomputer.com/Video%20Lessons.pdf)

Electrical Installation requirement

G107

[G107 Lesson 1 AS3000 Wiring rule overview.zip](#)

Video 1200

http://youtu.be/WBeeh_p2IQE

[G107 Lesson 2 Maximum Demand calculation.zip](#)

Video 1201

<http://youtu.be/fseWrbnuQpQ>

Video 1202

<http://youtu.be/tColhvk-37A>

[G107 Lesson 3 Cable selection.zip](#)

Video 1203

<http://youtu.be/6QyU03nf43U>

Video 1204

<http://youtu.be/Rjt91znelYI>

[G107 Lesson 4 Cable voltage drop calculation.zip](#)

Video 1205

http://youtu.be/5f4_o7eoN9k

Video 1206

http://youtu.be/Mfltp_Lu_Sw

[G107 Lesson 5 Derating of cable part 1.zip](#)

Video 1207

<http://youtu.be/m8SngH78Ce8>

Video 1208

<http://youtu.be/QkhwcGp9Wjo>

Video 1209

<http://youtu.be/A-RuMsTxEI0>

Video 1210

<http://youtu.be/7G4vvDzNIVU>

Video 1211

<http://youtu.be/7V6irU-hamo>

[G107 Lesson 6 Derating of cable part 2.zip](#)

Video 1212

http://youtu.be/_o4CZZz0FC4

Video 1213

http://youtu.be/_fIKk-406Ew

Video 1214

<http://youtu.be/Q1urXsDJ0Rk>

[G107 Lesson 7 Derating of cable for HRC fuse protection.zip](#)

Video 1215

<http://youtu.be/taqemDh06JA>

Video 1216

<http://youtu.be/k1teYmcnFnM>

[G0107 Lesson 8 Final subcircuit fault loop impedance.zip](#)

Video 1217

<http://youtu.be/rZXILwDHiTc>

Video 1218

<http://youtu.be/tTboXVGzxBA>

The links contain the following lessons

G107 Lesson 1 AS3000 Wiring rule overview

G107 Lesson 2 Maximum Demand calculation

G107 Lesson 3 Cable selection

G107 Lesson 4 Cable voltage drop calculation

G107 Lesson 5 Derating of cable part 1

G107 Lesson 6 Derating of cable part 2

G107 Lesson 7 Derating of cable for HRC fuse protection

G107 Lesson 8 Final subcircuit fault loop impedance

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Workbook

Answer

T1 Troubleshooting concepts

Video 1219

<https://www.youtube.com/watch?v=UU0H1KtccsA>

Video 1220

<https://www.youtube.com/watch?v=ic5R4C5HRUg>

Video 1221

<https://www.khanacademy.org/science/health-and-medicine/executive-systems-of-the-brain/cognition-lesson/v/problem-solving>

Video 1222

<https://www.youtube.com/watch?v=DtOoBgQr1ww>

Video 1223

<https://www.youtube.com/watch?v=oqlhQ5Y0mrg>

Video 1224

<https://www.youtube.com/watch?v=-lP7WffrO3o>

Video 1225

<https://www.youtube.com/watch?v=PeOC16lxKwg>

Video 1226

<https://www.youtube.com/watch?v=rOmeN9CZlQk>

T2 Troubleshooting water heater and appliance circuits/equipment

Video 1227

https://www.youtube.com/watch?v=qCXmyhEY_k4

Video 1228

<https://www.youtube.com/watch?v=LxnZQZm9Ycl>

Video 1229

https://www.youtube.com/watch?v=6E-F_dUZgz8

Video 1230

<https://www.youtube.com/watch?v=Yx2gfglB7bl>

Video 1231

<https://www.youtube.com/watch?v=ZwapTUBP6jw>

Video 1232

<https://www.youtube.com/watch?v=SlyStHM9Nr0>

Video 1233

<https://www.youtube.com/watch?v=Samu69sHw8E>

Video 1234

<https://www.youtube.com/watch?v=TNi9w4bAdRk>

Video 1235

<https://www.youtube.com/watch?v=9q31SzeVjP0>

Video 1236

<https://www.youtube.com/watch?v=CGvOheMLsrA>

T3 Troubleshooting electrical appliance circuits/equipment

Video 1237

<https://www.youtube.com/watch?v=pJkyY8qRRwc>

Video 1238

<https://www.youtube.com/watch?v=SnRXD-0oXZo>

Video 1239

https://www.youtube.com/watch?v=2nQ_pqbb1Tg

Video 1240

<https://www.youtube.com/watch?v=wAc8PPw-pel>

Video 1241

https://www.youtube.com/watch?v=4XJjbt_kLUY

Video 1242

<https://www.youtube.com/watch?v=3hyMggzguwY>

Video 1243

<https://www.youtube.com/watch?v=r3uJu1CAS5g>

T4 Troubleshooting lighting circuits

Video 1244

<https://www.youtube.com/watch?v=5ZAya0Zm-NM>

Video 1245

<https://www.youtube.com/watch?v=3hyMggzguwY>

Video 1246

<https://www.youtube.com/watch?v=ItChC0ZkFF8>

Video 1247

https://www.youtube.com/watch?v=aRQn4W8m_aY

Video 1248

<https://www.youtube.com/watch?v=dnvV781c6Sw>

T5 Troubleshooting single phase motor and control circuits

Video 1249

<https://www.youtube.com/watch?v=EHx04rEB2rc>

Video 1250

<https://www.youtube.com/watch?v=lxwTOByZ1yM>

Video 1251

<https://www.youtube.com/watch?v=23kavvzYR7U>

Video 1252

<https://www.youtube.com/watch?v=2wXgd5sik2I>

T6 Troubleshooting three phase induction motor
Video 1253

<https://www.youtube.com/watch?v=FUjZwMMoltQ>

Video 1254

<https://www.youtube.com/watch?v=Csrz5BahZ5M>

Video 1255

<https://www.youtube.com/watch?v=Zkbn62GALgl>

Video 1256

<https://www.youtube.com/watch?v=9jYsf3wDEg>

Video 1257

<https://www.youtube.com/watch?v=uAhVfVvoK3M>

Video 1258

<https://www.youtube.com/watch?v=X-ObolWvblQ>

Video 1259

<https://www.youtube.com/watch?v=Upbz1oUkyxA>

T7 Troubleshooting electrical installations

Video 1260

<https://www.youtube.com/watch?v=WUt3bdZoZqg>

Video 1261

<https://www.youtube.com/watch?v=ItChCOZkFF8>

Video 1262

<https://www.youtube.com/watch?v=oekBAKyqsW4>

Video 1263

<https://www.youtube.com/watch?v=Ff679IETOMY>

Video 1264

<https://www.youtube.com/watch?v=3hyMggzguwY>

Video 1265

https://www.youtube.com/watch?v=4XJjbt_kLUY

Electrical Equipment Repairs

G108	Electrical Fault Finding
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G008+G009 +G108+G109

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[www.highlightcomputer.com/Video Lessons.pdf](http://www.highlightcomputer.com/Video%20Lessons.pdf)

Fault finding + Electrical control equipments

G008+G009

[G008+G009 Lesson 1 AC Machine+AC motor control.zip](#)

Video 1266

<http://youtu.be/fwyx6xSOPIs>

Video 1267

http://youtu.be/DJ_huMMsVT4

Video 1268

<http://youtu.be/pezBHVInm6M>

http://www.filefactory.com/file/c386c73/n/G008_G009_Lesson_1_AC_Machine_AC_motor_control.zip

[G008+G009 Lesson 2 Synchronous machine+DC machine+Transformer.zip](#)

Video 1269

<http://youtu.be/bwxocSr9ptE>

Video 1270

<http://youtu.be/ohyGNBontLg>

Video 1271

<http://youtu.be/adm0IWJYlyE>

The links contain the following lessons

G008+G009 Lesson 1 AC Machine+AC motor control

G008+G009 Lesson 2 Synchronous machine+DC machine+Transformer

UEENEEG109A

Workbook 1

Workbook 2

T1 Basic relay circuits

Video 1272

<https://www.youtube.com/watch?v=E6uE6zZlxS0>

Video 1273

https://www.youtube.com/watch?v=cIV_HtQenOk

Video 1274

<https://www.youtube.com/watch?v=aJScwvP0njU>

Video 1275

<https://www.youtube.com/watch?v=HBPh6o1JZOo>

Video 1276

<https://www.youtube.com/watch?v=yMgcl1HG3mg>

Video 1277

<https://www.youtube.com/watch?v=NP0KjwOWPpk>

Video 1278

<https://www.youtube.com/watch?v=GjNydNNRIYI>

Video 1279

https://www.youtube.com/watch?v=cnPa3_rB9LU

Video 1280

<https://www.youtube.com/watch?v=T1o29KTVbTE>

Video 1281

<https://www.youtube.com/watch?v=FTO5KfIyaO8>

T2 Relay circuits and drawing conventions

Video 1282

<https://www.youtube.com/watch?v=S3vuNgus4uM>

Video 1283

<https://www.youtube.com/watch?v=gal48NCUvKA>

Video 1284

<https://www.youtube.com/watch?v=TGMj5Yo67WY>

Video 1285

<https://www.youtube.com/watch?v=KbvM5Tkc-UA>

T3 Remote STOP-START control and electrical interlocking

Video 1286

<https://www.youtube.com/watch?v=Mo-Uai-gDxw>

Video 1287

<https://www.youtube.com/watch?v=9uMIQycxygQ>

Video 1288

<https://www.youtube.com/watch?v=541mxiW8LnU>

Video 1289

<https://www.youtube.com/watch?v=ZdxpVi6FMil>

Video 1290

<https://www.youtube.com/watch?v=uNygpiG7SGU>

Video 1291

<https://www.youtube.com/watch?v=xWshJzvHJ-U>

Video 1292

<https://www.youtube.com/watch?v=kHbXbK7S188>

Video 1293

<https://www.youtube.com/watch?v=IHZCKqmLUY8>

Video 1294

<https://www.youtube.com/watch?v=bBxZnW6szgU>

Video 1295

<https://www.youtube.com/watch?v=Zq42AkzAJXw>

T4 Time delay relays

Video 1296

<https://www.youtube.com/watch?v=nTx9n8BNhgQ>

Video 1297

<https://www.youtube.com/watch?v=ZFITOcEnUbg>

Video 1298

<https://www.youtube.com/watch?v=w043mOdIga0>

Video 1299

<https://www.youtube.com/watch?v=oBxB3Fkyomk>

Video 1300

<https://www.youtube.com/watch?v=r8voq2Z5apw>

Video 1301

<https://www.youtube.com/watch?v=LQpIE5uJqm8>

Video 1302

<https://www.youtube.com/watch?v=R8Q6mUwH05Q>

Video 1303

https://www.youtube.com/watch?v=m5_i-77GPgg

Video 1304

<https://www.youtube.com/watch?v=Psd5T8kvSyM>

T5 Circuits using contactors

Video 1305

<https://www.youtube.com/watch?v=WT14nfmU1cl>

Video 1306

https://www.youtube.com/watch?v=RjYyAPcr_7k

Video 1307

<https://www.youtube.com/watch?v=LgfAbpZTIq4>

Video 1308

<https://www.youtube.com/watch?v=H2GENSON4IA>

Video 1309

<https://www.youtube.com/watch?v=541mxiW8LnU>

Video 1310

<https://www.youtube.com/watch?v=E30g5C-qdmQ&list=PLmmlq86VktYyHfcuZMmXpO1sUHok6YAxQ&index=21>

Video 1311

<https://www.youtube.com/watch?v=aml0VGzNXEo>

Video 1312

<https://www.youtube.com/watch?v=gTiOJZalzhY>

T6 Jogging and interlocking

Video 1313

<https://www.youtube.com/watch?v=oCdjVCNlswM>

Video 1314

<https://www.youtube.com/watch?v=Gty7rFrsnBg>

T7 Control devices

Video 1315

<https://www.youtube.com/watch?v=O-OggFE9SD4>

Video 1316

<https://www.youtube.com/watch?v=XMfH2P2Fc6Q>

Video 1317

https://www.youtube.com/watch?v=2MRu9SQUU_g

Video 1318

<https://www.youtube.com/watch?v=aml0VGzNXEo>

Video 1319

<https://www.youtube.com/watch?v=eBK8lgEd0r0>

Video 1320

<https://www.youtube.com/watch?v=bsu7Y-1nC8Y>

Video 1321

https://www.youtube.com/watch?v=PbAGl_mv5XI

T8 Programmable relays

Video 1322

<https://www.youtube.com/watch?v=OcjZIC6aNjI>

Video 1323

<https://www.youtube.com/watch?v=L8gXYFOA8Uk>

Video 1324

<https://www.youtube.com/watch?v=jEM2CeI155o>

Video 1325

<https://www.youtube.com/watch?v=pPIXefBO2qo>

Video 1326

<https://www.youtube.com/watch?v=STKH6Rp7rX8>

Video 1327

<https://www.youtube.com/watch?v=IGIKryPr66s>

Video 1328

[https://www.youtube.com/watch?](https://www.youtube.com/watch?v=2OctoNWdgBE&list=PLdM9_LCEQI2A0U6IcBpKpt5khBSS0DaSA&index=34&t=0s)

[v=2OctoNWdgBE&list=PLdM9_LCEQI2A0U6IcBpKpt5khBSS0DaSA&index=34&t=0s](https://www.youtube.com/watch?v=2OctoNWdgBE&list=PLdM9_LCEQI2A0U6IcBpKpt5khBSS0DaSA&index=34&t=0s)

Video 1329

<https://www.youtube.com/watch?v=JKvCjDyvuT8>

T9 Three-phase induction motor starters

Video 1330

<https://www.youtube.com/watch?v=5RAOI5gYj74>

Video 1331

<https://www.youtube.com/watch?v=IQsAaP331SY>

Video 1332

<https://www.youtube.com/watch?v=qIlgH1layoYk>

Video 1333

<https://www.youtube.com/watch?v=A06NAZc96bk>

Video 1334

<https://www.youtube.com/watch?v=CPTyxMTNqP0>

Video 1335

<https://www.youtube.com/watch?v=9z7be-Ye5PA>

T10 Three-phase induction motor starters- reduced voltage

Video 1336

<https://www.youtube.com/watch?v=h89TTwINnpY>

Video 1337

https://www.youtube.com/watch?v=sFO_qNtuEDs

Video 1338

<https://www.youtube.com/watch?v=DpB-kdM2RA4>

Video 1339

<https://www.youtube.com/watch?v=KPCzRvU-xzg>

Video 1340

<https://www.youtube.com/watch?v=i-f7c7KrfeM>

Video 1341

<https://www.youtube.com/watch?v=x7W05Qgxmh8>

Video 1342

<https://www.youtube.com/watch?v=h89TTwINnpY>

Video 1343

<https://www.youtube.com/watch?v=LfNc48OYBok>

Video 1344

<https://www.youtube.com/watch?v=PjhhOgud4Lo>

Video 1345

<https://www.youtube.com/watch?v=3VoxvXb5mSc>

Video 1346

<https://www.youtube.com/watch?v=iQ4uGLfVnJI>

Video 1347

<https://www.youtube.com/watch?v=ZADxLxHP0-s>

Video 1348

<https://www.youtube.com/watch?v=CwA2ldd5e7s>

Video 1349

https://www.youtube.com/watch?v=7Cgy_NMw7ls

Video 1350

<https://www.youtube.com/watch?v=PfoBSVRo94E>

Video 1351

<https://www.youtube.com/watch?v=KPCzRvU-xzg>

Video 1352

<https://www.youtube.com/watch?v=mKEgtk9LzYM>

Video 1353

https://www.youtube.com/watch?v=7Cgy_NMw7ls&list=PLoP0dDyFls-VYSb8jXj2yz4vfU8h4M7PJ&index=46

T11 Three-phase induction motor reversal and braking

Video 1354

<https://www.youtube.com/watch?v=ZyIbZlXSsFg>

Video 1355

<https://www.youtube.com/watch?v=P1Rvto-93hE>

Video 1356

<https://www.youtube.com/watch?v=ZyIbZlXSsFg>

Video 1357

<https://www.youtube.com/watch?v=o1hEFan6ai4>

Video 1358

<https://www.youtube.com/watch?v=K-D43CGgHHk>

Video 1359

https://www.youtube.com/watch?v=__nS3OeIY-s

Video 1360

<https://www.youtube.com/watch?v=VqgXVli0jw8>

Video 1361

https://www.youtube.com/watch?v=sO6Heoyq6_g

T12 Three-phase induction motor speed control

Video 1362

<https://www.youtube.com/watch?v=-lwupzRMUCA>

Video 1363

<https://www.youtube.com/watch?v=uRMcnrbGFFc>

Video 1364

<https://www.youtube.com/watch?v=K3jUTnhzA-Q>

Video 1365

<https://www.youtube.com/watch?v=1OH1GJbM6CM>

Video 1366

https://www.youtube.com/watch?v=mdxFbkpl_c

Video 1367

<https://www.youtube.com/watch?v=MiVpnhV4IxQ>

Video 1368

<https://www.youtube.com/watch?v=a7hXiFP7voc>

Video 1369

<https://www.youtube.com/watch?v=5RpQINUOBKw>

Video 1370

<https://www.youtube.com/watch?v=nIPFD3RH0NM>

Video 1371

<https://www.youtube.com/watch?v=WAKbEVBnvKc>

UEENEEE107A

[Workbook](#)

[E107 Answers](#)

KS01-EE107A Drawings, diagrams and schedules

T1 Architectural drawings

Video 1372

<https://www.youtube.com/watch?v=HEo0NqYputQ>

Video 1373

https://www.youtube.com/watch?v=s8rm_VPbMPk

Video 1374

<https://www.youtube.com/watch?v=JTaz4f8oxkE>

Video 1375

<https://www.youtube.com/watch?v=24rnfO8s0hU>

Video 1376

<https://www.youtube.com/watch?v=y27mM7R9Xho>

Video 1377

https://www.youtube.com/watch?v=-Q_C4uF-BHU

Video 1378

<https://www.youtube.com/watch?v=ONxwltuV89k>

Video 1379

<https://www.youtube.com/watch?v=WiCTVvhD5D0>

Video 1380

<https://www.youtube.com/watch?v=eNNAnSCrrBl>

Video 1381

<https://www.youtube.com/watch?v=BrNQOXixAw0>

T2 Electrical drawings

Video 1382

<https://www.youtube.com/watch?v=Ua2IK-PCfUU>

Video 1383

<https://www.youtube.com/watch?v=zTo8QL7A-wg>

Video 1384

<https://www.youtube.com/watch?v=KbvM5Tk-UA>

Video 1385

<https://www.youtube.com/watch?v=Aolb3zPTxdc>

Video 1386

<https://www.youtube.com/watch?v=52JoONLGI2s>

Video 1387

<https://www.youtube.com/watch?v=Z05xuqhGNZ8>

Video 1388

<https://www.youtube.com/watch?v=YATrLcxicw4>

Video 1389

<https://www.youtube.com/watch?v=D50db0tawgY>

Video 1390

<https://www.youtube.com/watch?v=2f6YDcS1j2c>

Video 1391

<https://www.youtube.com/watch?v=KXcd6ufVzyE>

T3 Circuit diagrams

Video 1392

<https://www.youtube.com/watch?v=52JoONLGI2s>

Video 1393

<https://www.youtube.com/watch?v=j0zf-otH3cY>

Video 1394

<https://www.youtube.com/watch?v=KbvM5Tkc-UA>

Video 1395

https://www.youtube.com/watch?v=_Thx9uTSW2g

Video 1396

<https://www.youtube.com/watch?v=TFD8ZqXujsE>

Video 1397

<https://www.youtube.com/watch?v=-OdUYRtozss>

Video 1398

https://www.youtube.com/watch?v=5_O9i2VarXg

Video 1399

<https://www.youtube.com/watch?v=DI1gFBNa0Ik>

Video 1400

<https://www.youtube.com/watch?v=Pq83O2Z1yF0>

Video 1401

<https://www.youtube.com/watch?v=KXcd6ufVzyE>

T4 Wiring diagrams

Video 1402

<https://www.youtube.com/watch?v=KbvM5Tkc-UA>

Video 1403

<https://www.youtube.com/watch?v=TFD8ZqXujsE>

Video 1404

https://www.youtube.com/watch?v=hmBn_SG5pms

Video 1405

<https://www.youtube.com/watch?v=UbsiKl4upBM>

Video 1406

<https://www.dailymotion.com/video/x2l8svg>

T5 Building construction drawings and diagrams

Video 1407

<https://www.youtube.com/watch?v=knLXXSDte8k>

Video 1408

<https://www.youtube.com/watch?v=RitDpwVpNVQ>

Video 1409

<https://www.youtube.com/watch?v=HEo0NqYputQ>

Video 1410

<https://www.youtube.com/watch?v=Y2hJDIUgVZU>

Video 1411

<https://www.youtube.com/watch?v=w0PY1T9HUbE>

Video 1412

<https://www.youtube.com/watch?v=R7YxG4nsqeg>

Video 1413

<https://www.youtube.com/watch?v=rhfw-ngyZl>

KS02-EE107A Introduction to regulations, compliance standards and codes

T1 Regulation for undertaking electrical work

Video 1414

<https://www.youtube.com/watch?v=aNPnBEqbg7A>

Video 1415

https://www.youtube.com/watch?v=8fn0Rg_YC7w

Video 1416

<https://www.youtube.com/watch?v=j-BBzO37aSQ>

Video 1417

<https://www.youtube.com/watch?v=TBvRI5FwUL0>

Video 1418

<https://hcrflyers.com/index.php/spectrumrc-videos/spektrum-as3000-switch-setup-tutorial>

T2 Standards philosophy and format

Video 1419

<https://www.youtube.com/watch?v=cJo4wXAQGuw>

Video 1420

<https://www.youtube.com/watch?v=ZipOu72HGkU>

T3 Purpose, format and content of typical job specifications

Video 1421

<https://www.youtube.com/watch?v=uN5USQw3kvQ>

Video 1422

<https://www.youtube.com/watch?v=dw3CrHMTzMk>

FINAL TUTORIALS

KS02-EG105A Electrical installations and equipment — principles and requirements

www.iqytechnicalcollege.com/CapstoneLesson.pdf

www.iqytechnicalcollege.com/CapstoneLesson.htm

Capstone Exercises All G105A

[www.iqytechnicalcollege.com/Capstone Exercises All G105A.pdf](http://www.iqytechnicalcollege.com/Capstone%20Exercises%20All%20G105A.pdf)

E101+102+105 Capstone

http://www.iqytechnicalcollege.com/E101+102+105_Capstone.pdf

E104 Capstone

www.iqytechnicalcollege.com/E104_Capstone.pdf

E107+G109 Capstone

http://www.iqytechnicalcollege.com/E107+G109_Capstone.pdf

Electrical Trade Resources

[www.iqytechnicalcollege.com/Electrical Trade Resources.pdf](http://www.iqytechnicalcollege.com/Electrical_Trade_Resources.pdf)

F102+F104 Capstone

http://www.iqytechnicalcollege.com/F102+F104_Capstone.pdf

G006 Capstone

www.iqytechnicalcollege.com/G006_Capstone.pdf

G033 Capstone

www.iqytechnicalcollege.com/G033_Capstone.pdf

G101+G102 Capstone

http://www.iqytechnicalcollege.com/G101+G102_Capstone.pdf

G103+G106 Capstone

http://www.iqytechnicalcollege.com/G103+G106_Capstone.pdf

G105 Safety Testing

www.iqytechnicalcollege.com/G105_Safety_Testing.pdf

G107 Cable Selection Capstone

www.iqytechnicalcollege.com/G107_Cable_Selection_Capstone.pdf

G107 Capstone

www.iqytechnicalcollege.com/G107_Capstone.pdf

G108 Capstone

www.iqytechnicalcollege.com/G108_Capstone.pdf

VTT Trade Test

www.iqytechnicalcollege.com/VTT_Trade_Test.pdf

CAPSTONE LESSON-QR Code

www.iqytechnicalcollege.com/CAPSTONE_LESSON-QR_Code.pdf

Evidence shall show an understanding of electrical installations and equipment principles and requirements to an extent indicated by the following aspects:

T1 Effects of electric current encompassing:-----E101

- Physiological effects of current.
- Basic principles by which an electric current can produce heat, light, motion and a chemical reaction.

T2 Single path practical circuit encompassing:-----E104

- Arrangement of energy source, protection device, switch and load in a circuit.
- The purpose of each component in the circuit.
- Consequences of an open-circuits, closed-circuits and short-circuits.

T3 Single-source multiple-path d.c. circuits encompassing: :-----
-E104

- Circuit configurations and connection.
- Relationship between the parameters of voltage, current, resistance and power dissipation in the whole or any part of the circuit.
- Safely measuring the parameters for the whole or any part of the circuit.
- Methods of determining circuit behaviour for variation in any of the parameters from measured and calculated values.

T4 Alternating voltage and current generation, phase relationships, energy in an a.c. circuit encompassing: :-----G102

- Sinusoidal voltage generation and resulting current.
- The terms period; maximum value; peak-to-peak value; instantaneous value; average value; root-mean-square (r.m.s.) value; and frequency.
- Three-phases generation.
- Relationship between the phase voltages generated in a three-phase alternator and the conventions for identifying each.
- Method of determining the phase sequence or phase rotation of a three-phase supply.
- Methods of determining power and energy supplied by three phase circuits.

T5 Fundamental safety principles of the AS/NZS 3000 Part 1 (Section 1) and deemed to comply solution given in Part 2 encompassing: :-----
E101+137

- Definition of terms

- Fundamental safety principles of protection against direct and indirect contact with live parts; thermal effects; overcurrent; earth faults; abnormal voltages; spread of fire; mechanical injury and external influences.
- Fundamental principles of installation design; selection and installation of equipment; means of compliance (including alterations, additions and repairs) and verification of compliance.

T6 Electric motor selection, starting method and overload protection encompassing:

:-----G006

- Types of motor enclosures suitable for given environmental conditions
- Criteria for selecting motor starters and overload protection.
- Types and connection arrangements for direct-on-line and reduced voltage starters.
- Thermal, magnetic and thermistor overload protection methods.

T7 Ability to apply AS/NZ 3000 requirements for protective and functional earthing encompassing: :-----G063+G107+G103

- Purpose of protective and functional earthing.
- Parts of the protective earthing systems.
- Earthing arrangements, earthing of equipment and equipotential bonding.
- Methods of determining the maximum fault loop impedance for a circuit.
- Selection of protective conductor and active conductor sizes for each circuit to ensure earth-fault loop impedance is sufficiently low to operate the circuit protective device.

T8 MEN system and its application encompassing: :-----G063+G107+G103

- The roles of the protective earthing (PE) and neutral (N) conductors in an a consumer's installation and their relationship to the protective earth neutral (PEN) conductor in the electricity distributor's system or sub-main to an outbuilding.
- The importance of the MEN link when a fault occurs.
- The likely consequences of the absence of the MEN link or high impedance in the PEN conductor when a fault occurs.
- The requirements for installation of an MEN link in an installation and an outbuilding.

T9 Knowledge of the application of transformers encompassing: :-----G006

- Transformers used in distribution and transmission systems and large consumer installations.
- Transformers used in welding machines.
- Applications in appliances
- Risks and safety control measures associated with connection and disconnection of instrument transformers
- Safe working procedures when connecting and testing transformers.
- AS/NZS 3000 requirements and restriction on the installation and use of transformers.

T10 Ability to apply AS/NZ 3000 requirements for protection of circuit against overcurrent and abnormal voltages encompassing: :-----
G063+G107+G103

- Minimum fault levels specified by electricity distributors
- Methods and arrangement for protection against short-circuit currents and overload currents.
- Coordination of overload and short-circuit protection devices.
- Coordination between conductors and overload protection devices.
- Causes of over and undervoltage.
- Device and requirements for protection against over and undervoltage.

T11 Additional protection by use of RCDs and use of extra-low voltage for basic and fault protection encompassing: :-----**G063+G107+G103**

- Limitation of an RCD to protect against contact with live parts
- AS/NZS 3000 requirements for use of RCDs.
- Conditions for use of extra-low voltage to provide for basic and fault protection
- AS/NZS 3000 requirements for installation of SELV and PELV systems

T12 Ability to select cables for single and three phase mains and sub-mains for single and multiple installations that comply with requirements of AS/NZS 3000 and AS/NZS 3008.1 encompassing: :-----**G063+G107+G103**

- Methods of determining maximum demand.
- Types of cables available.
- Installation methods and external influences effecting cable current-carrying capacity
- Voltage drop limitation
- Short-circuit performance consideration.

T13 Ability to select cables for final sub-circuits that comply with requirements of AS/NZS 3000 and AS/NZS 3008.1 encompassing: :-----**G107**

- Maximum demand of final sub-circuits.
- Types of cables available.
- Installation methods and external influences effecting cable current-carrying capacity
- Effect of earth-fault loop impedance and voltage drop limitations on circuit route length.
- Short-circuit performance considerations.

T14 Ability to apply AS/NZS 3000 requirements for control and protection of installations encompassing: :-----**G063+G107+G103+G109**

- Devices for functions of isolation; emergency; Mechanical maintenance and functional control.
- Method for assessing prospective short circuit current.
- Devices and arrangement for protection against overload and short-circuit current.
- Additional protection by RCD
- Protection against switchboard internal arc faults.

T15 Ability to apply AS/NZS 3000 requirements for the installation of electrical equipment in given damp situations encompassing: :-----
G063+G107+G103

- Limitation of installation of equipment in classified zones.
- Selection and location of equipment suitable for installation in given classified zones.
- Additional protection by RCD.
- Equipotential bonding in showers and bathrooms and swimming and spa pools.

T16 Ability to install, modify and test electrical equipment for construction and demolition sites, complying with AS/NZS 3012 and applicable workplace safety legislation encompassing: :-----**G063+G107+G103**

- Supply and installation requirements.
- Protection of circuits.
- Initial and periodic inspection and testing
- Portable tool safety testing and tagging system in accordance with AS/NZS 3760.

T17 Knowledge of AS/NZS 3000 requirements for the installation of aerial conductors and underground wiring encompassing: :-----
G063+G107+G103

- Types and application of aerial conductors
- Aerial span limitations and required clearances
- Selection of aerial supporting poles/post and struts for a given application.
- Use and requirements of catenary support systems
- Acceptable cable types and protection for underground wiring categories.
- Underground wiring depth layer and protection
- Underground wiring clearances from other services

T18 Knowledge of AS/NZS 3000 requirements for electrical installations in hazardous areas encompassing: :-----**G063+G107+G103**

- Types of areas classified as a hazardous area
- Standards to which the selection, installation and maintenance of electrical equipment shall comply.
- Additional training required to work competently with electrical equipment for hazardous areas
- T19 Ability to verify compliance of an electrical installation in accordance with AS/NZS 3000 encompassing: :-----**G063+G107+G103**
- Visual inspection to determine whether the installation complies with requirements set out in Section 2 to 7 of AS/NZS 3000 and relevant specific installation standards.
- Mandatory tests following guidance given in AS/NZS 3017

T20 Ability to perform effective safe isolation of any equipment encompassing: :-----
G063+G107+G103

- Preparation of a 'safe work method statement' (SWMS) or Job Safety Analysis (JSA) for effective safe isolation.
- Safe methods for identifying source of supply to be isolated.
- Switching-off, lock-out and tagging procedures.

- Safe methods for confirming effective and safe isolation

T21 Ability to apply AS/NZS 3000 requirements to install and terminate thermoplastic insulated cables; elastomer sheathed cables; XLPE sheathed cables; and high temperature cables; armoured cables; and neutral screened cables in a wide range of applications.

T22 Ability to perform the circuit tests required for electrical cables in a range of installations and final sub-circuit encompassing: :-----G033+-
G063+G107+G103

- Following safe testing procedures.
- Tests to show if the earth continuity and earth-fault loop impedance are sufficiently low.
- Testing to show if insulation resistance is sufficiently high.
- Testing to show if the polarity and circuit connections are correct.

T23 Ability to install final sub-circuit wiring into switchboards and connect to switchboard equipment in accordance with AS/NZS 3000 and electricity distributor's requirements.

:-----G063+G107+G103

T24 Ability to apply AS/NZS 3000 and electricity distributor's requirements for the installation and connect consumers mains encompassing: :-----
G063+G107+G103

- Installing of underground and overhead consumers mains
- Terminating consumers mains at pillars, pits mains connection boxes and consumers switchboard.
- Install unprotected consumers mains to reduce the risk of short-circuit current to a minimum.
- Installing bonding conductors where required.

T25 Ability to read, sketch and interpret electrical diagrams encompassing: :-----
--E107

- Purpose and characteristics of schematic, block and wiring diagrams, plans and schedules.
- Conventions used in documenting electrical information
- Read and interpret schematic, block and wiring diagrams, plans and schedules
- Sketch electrical diagrams using conventional symbols

T26 Knowledge and understanding occupational safety and health encompassing: :-
-E101

- Basics of Occupational Safety and Health regulations
- Legal responsibilities for employers and employees
- Employers' and employees' own "duty of care".
- Safety committees and their role

T27 Knowledge and understanding of the requirements for personal safety in the workplace encompassing: -E101

- Purpose and use of Safe Work Method Statements (SWMS) or Job Safety Analysis (JSA).

- Purpose and process of reporting OHS incidents.
- Safety procedures for working with electrical circuits and equipment.
- Procedures for safe and effective isolation of electrical supply.
- Regulations for the supervision of apprentices and trainees.

T28 Process in rescuing a person in contact with live electrical conductors or equipment and the primary importance of the safety of the rescuer. -E101

T29 Application of emergency first aid requirements for an electric shock victim encompassing: -E101

- Calling for help.
- Applying cardiopulmonary resuscitation (CPR).
- Selection and use of fire extinguishers to control electrical fire at accident site.

T30 Dangers of high voltage equipment and distribution systems encompassing: -E101

- Step and touch and induced voltages.
- Sources of induced voltage and stored energy
- Creepage and clearance requirements.
- Application of safe working procedures in the vicinity of HV equipment.

T31 Systematic method of commissioning and decommissioning electrical equipment and installations encompassing: :-----G063+G107+G103+G006

- Commissioning safety procedures
- Circuit voltage testing
- Phase rotation checks
- Functional testing
- Instrument and control parameter settings
- Decommissioning safety procedures.
- Identification of circuits with their control and protection devices.
- Impact of isolation on other parts of an installation.
- Tagging, testing and earthing.
- Safe removal of equipment.

T32 Diagnosing and rectifying faults in electrical apparatus and associated circuits encompassing:-----G108

VIDEOS

Video 1423

<https://www.youtube.com/watch?v=mhPZVOTH8Q>

Video 1424

<https://www.youtube.com/watch?v=d5Z06c7tSx4>

Video 1425

<https://www.youtube.com/watch?v=nWXg6BsQ06U>

Video 1426

https://www.youtube.com/watch?v=E_AWcu9r3YI

Video 1427

<https://www.youtube.com/watch?v=f4quQFOZ4as>

Video 1428

<https://www.youtube.com/watch?v=XJqfwMgfHn0>

Video 1429

<https://www.facebook.com/tafedigital.electrotechnology/videos/sample-of-capstone-exam-question/1118555261500853/>

Video 1430

<https://www.youtube.com/watch?v=bo43Wjnrjsg>

Testing

Inspection and Testing

Video 1431

<https://www.youtube.com/watch?v=Dwbh7mEgvcl>

Video 1432

<https://www.youtube.com/watch?v=2g6d9QQEDQk>

Wiring Installation Testing

Video 1433

https://www.youtube.com/watch?v=E_AWcu9r3YI

Video 1434

<https://www.youtube.com/watch?v=eNfkl8Ax74k>

Video 1435

https://www.youtube.com/watch?v=dPD7PJNN_Kg

Video 1436

<https://www.youtube.com/watch?v=hkFm7QCu16Y>

Video 1437

<https://www.youtube.com/watch?v=HddUI4nS-00>

Video 1438

<https://www.youtube.com/watch?v=cXIVVgsp64c>

Video 1439

https://www.youtube.com/watch?v=O4Uc_9ZpdAM

Insulation Resistance Test

Video 1440

https://www.youtube.com/watch?v=phKS_LQMs18

Video 1441

<https://www.youtube.com/watch?v=-n6BiFJy8w>

Australian Switchboard

Video 1442

<https://www.youtube.com/watch?v=ieIVhHgsF1A>

Testing Tester

Video 1443

<https://www.youtube.com/watch?v=alCjuNZDP9M>

Polarity Testing

Video 1444

<https://www.youtube.com/watch?v=QHsnZ0RetE4>

Video 1445

<https://www.youtube.com/watch?v=X5VEtGTSrwg>

Video 1446

<https://www.youtube.com/watch?v=u40QLnbdA-0>

Video 1447

<https://www.youtube.com/watch?v=s8au8ves-SY>

Video 1448

<https://www.youtube.com/watch?v=pHlzBSMjy2I>

Video 1449

<https://www.youtube.com/watch?v=Bniff9INjo>

Video 1450

<https://www.youtube.com/watch?v=qyAPLui38HE>

Video 1451

<https://www.youtube.com/watch?v=ODJ1J2IzhE>

Video 1452

<https://www.youtube.com/watch?v=F0CFKl6Cypw>

Video 1453

https://www.youtube.com/watch?v=giSr_opxSx8

Video 1454

<https://www.youtube.com/watch?v=AG5KpuPRLSo>

Video 1455

<https://www.youtube.com/watch?v=TaeDg9cgjTU>

Hot Neutral Wire Test

Video 1456

<https://www.youtube.com/watch?v=S9MNHnBD6E4>

Continuity Polarity Test Intermediate Lighting Circuit

Video 1457

<https://www.youtube.com/watch?v=LcJu2tlhpiI>

Video 1458

<https://www.youtube.com/watch?v=dMtxkhL6c8I>

Video 1459

<https://www.youtube.com/watch?v=TjWcgHmw464>

Outlet Polarity Test

Video 1460

<https://www.youtube.com/watch?v=dbEvvcvYFiY>

Video 1461

<https://www.youtube.com/watch?v=ELiTFD6ehul>

Video 1462

<https://www.youtube.com/watch?v=kmlzxOMfAXg>

Video 1463

<https://www.youtube.com/watch?v=01KmCrXrZGk>

Video 1464

<https://www.youtube.com/watch?v=lcsLy9k15pA>

Video 1465

<https://www.youtube.com/watch?v=WOCTOGIJeEc>

ST007

Video 1466

<https://www.youtube.com/watch?v=mYP-bbkC8Mw>

Fixing Reverse Polarity Socket

Video 1467

<https://www.youtube.com/watch?v=EZ4hO41jZEE>

RCCB Polarity Test

Video 1468

<https://www.youtube.com/watch?v=ODJ1J2IzhE>

Parallel Earth Path Testing

Video 1469

<https://www.youtube.com/watch?v=r94dJ7ASRTY>

Radial Socket Outlet Test

Video 1470

<https://www.youtube.com/watch?v=Tcwm6NBBvCs>

AC Power Cord

Video 1471

<https://www.youtube.com/watch?v=lKkrjWPVz9I>

Main Polarity Test

Video 1472

<https://www.youtube.com/watch?v=1mGsn1BCPzA>

Smoke Detector Polarity Test

Video 1473

<https://www.youtube.com/watch?v=9GjXVCtfVBI>

Testing Ring Final Sub circuit

Video 1474

https://www.youtube.com/watch?v=BKyK0-_v5xc

Sure Test Analyzer

Video 1475

https://www.youtube.com/watch?v=_04HmpFBxdQ

Ring Final Sub Circuit Test

Video 1476

<https://www.youtube.com/watch?v=KrkPiAHy6pc>

Video 1477

<https://www.youtube.com/watch?v=uPKksOxQTPi>

Phase Rotation Sequence Testing

Video 1478

<https://www.youtube.com/watch?v=S9h3z9HPZcA>

Ethernet Cable Terminating

Video 1479

https://www.youtube.com/watch?v=wqKYi_RqTAQ

Transformer Polarity

Video 1480

<https://www.youtube.com/watch?v=Yd37yMbgDq0>

Generator with Floating Neutral

Video 1481

<https://www.youtube.com/watch?v=Wf3ZKDN-8Go>

Three Phase Induction Motor

Video 1482

<https://www.youtube.com/watch?v=lafsc0kd6rA>

Earth Fault Loop Impedance Testing

Video 1483

<https://www.youtube.com/watch?v=caUVdKWH2hs>

Video 1484

https://www.youtube.com/watch?v=_twVvsGo81A

Radial Circuit Continuity Test

Video 1485

<https://www.youtube.com/watch?v=TyznESIF190>

Electrical Power Tester

Video 1486

https://www.youtube.com/watch?v=_aNhx-pru1A

RCD Testing

Video 1487

<https://www.youtube.com/watch?v=d9ftjAQ6znQ>

ELCB Testing

Video 1488

<https://www.youtube.com/watch?v=WOCTOGIJeEc>

Hall Effect Sensor

Video 1489

<https://www.youtube.com/watch?v=E5eNHewAee8>

ELECTRICAL TESTING

Electrical Inspection and Testing

Video 1490

https://www.youtube.com/watch?v=rnvNfl__kYU&list=PLVyQJOWqmaEg5bIPB8jA8WITXtKENUfsA

Main Protective Bonding Test

Video 1491

https://www.youtube.com/watch?v=rnvNfl__kYU&list=PLSVLgJeK7oWvP9rycMH4Cfp-EwEMz-KN0&index=1

Protective Summary Bonding Test

Video 1492

<https://www.youtube.com/watch?v=v38PflVy2rI&list=PLSVLgJeK7oWvP9rycMH4Cfp-EwEMz-KN0&index=2>

R1 R2 Test

Video 1493

<https://www.youtube.com/watch?v=S-C8cwSA8Vg&list=PLSVLgJeK7oWvP9rycMH4Cfp-EwEMz-KN0&index=3>

3 Phase R1 R2 Test

Video 1494

<https://www.youtube.com/watch?v=D8kYm1Do59w&list=PLSVLgJeK7oWvP9rycMH4Cfp-EwEMz-KN0&index=4>

Ring Final Sub Circuit Test

Video 1495

<https://www.youtube.com/watch?v=uPKksOxQTPI&list=PLSVLgJeK7oWvP9rycMH4Cfp-EwEMz-KN0&index=5>

Single Phase Insulation resistance Test

Video 1496

https://www.youtube.com/watch?v=eRE_8njFxZs&list=PLSVLgJeK7oWvP9rycMH4Cfp-EwEMz-KN0&index=6

Polarity Testing on lighting

Video 1497

<https://www.youtube.com/watch?v=pHlzBSMjy2I&list=PLSVLgJeK7oWvP9rycMH4Cfp-EwEMz-KN0&index=8>

Electrode test

Video 1498

<https://www.youtube.com/watch?v=oYb2jqD7cH4&list=PLSVLgJeK7oWvP9rycMH4Cfp-EwEMz-KN0&index=9>

Protective Supplementary Bonding Test

Video 1499

<https://www.youtube.com/watch?v=v38PflVy2rI>

Video 1500

<https://www.youtube.com/watch?v=CVxBettQpPU>

Testing Continuity of CPC

Video 1501

<https://www.youtube.com/watch?v=Lt0JK2xVhjk>

Insulation Resistance Test

Video 1502

<https://www.youtube.com/watch?v=yY8nsGn2xBo>

Video 1503

<https://www.youtube.com/watch?v=Ek1u2RjQffU>

Earthing and Bonding

Video 1504

<https://www.youtube.com/watch?v=UeF3PYM1M7c>

RCD Test

Video 1505

<https://www.youtube.com/watch?v=PfcPDr1SSZ4>

Single Phase Insulation Resistance Test

Video 1506

https://www.youtube.com/watch?v=eRE_8njFxZs&list=PLSVLgJeK7oWvP9rycMH4Cfp-EwEMz-KN0&index=6

3 Phase Insulation Resistance Test

Video 1507

<https://www.youtube.com/watch?v=yyLsBfTdxOw&list=PLSVLgJeK7oWvP9rycMH4Cfp-EwEMz-KN0&index=7>

TT System Test

Video 1508

<https://www.youtube.com/watch?v=q9dImp-KjQo&list=PLSVLgJeK7oWvP9rycMH4Cfp-EwEMz-KN0&index=10>

Earth Fault Loop impedance Test

Video 1509

https://www.youtube.com/watch?v=vtZpe4_Go78&list=PLSVLgJeK7oWvP9rycMH4Cfp-EwEMz-KN0&index=11

Phase Rotation Sequence Test

Video 1510

<https://www.youtube.com/watch?v=S9h3z9HPZcA&list=PLSVLgJeK7oWvP9rycMH4Cfp-EwEMz-KN0&index=14>

Voltage Test on Photovoltaics arrays

Video 1511

<https://www.youtube.com/watch?v=fu41IMBOjNg&list=PLSVLgJeK7oWvP9rycMH4Cfp-EwEMz-KN0&index=15>

Photovoltaics Short Circuit Test

Video 1512

<https://www.youtube.com/watch?v=hOjcaKmR4IE&list=PLSVLgJeK7oWvP9rycMH4Cfp-EwEMz-KN0&index=16>

Insulation Resistance Test on Photovoltaics Arrays

Video 1513

<https://www.youtube.com/watch?v=EcZFr9GeYu0&list=PLSVLgJeK7oWvP9rycMH4Cfp-EwEMz-KN0&index=17>

City & Guild Test and Inspection

Video 1514

<https://www.youtube.com/watch?v=OtFsmL-Nszc&list=PLSVLgJeK7oWvP9rycMH4Cfp-EwEMz-KN0&index=18>

UEENEEC020B Participate in electrical work and competency development activities

KS01-EC020B Electrical work competency development activities

Evidence shall show an understanding of electrical work competency development activities to an extent indicated by the following aspects:

T1. Responsibilities under a competency development plan:

- Competency Development (Training) Plans encompassing:
 - state/territories requirements (acts/regulations)
 - competency development (training) contracts
 - competency development (training) period
 - purpose of competency development (training) plans
 - process in developing competency development (training) plans
 - parties involved in the competency development (training) plan
- Qualification Structure encompassing:
 - scope of work
 - Training Packages - electrotechnology
 - competency standard units (CSUs)
 - structure of Qualification
 - off-Job Requirements
 - on-Job Requirements
- Responsibilities of Parties to the contract encompassing:
 - employer responsibilities
 - learner responsibilities
 - RTO responsibilities
 - State Training Authorities (STA)
- Electrotechnology Industry Career Opportunities encompassing:
 - industry Areas
 - qualification levels
 - career paths
- Industry customs and practices encompassing:
 - industry bodies – employer and employee representatives
 - regulatory bodies – including licensing/registration, OHS, IR, training authorities – apprentice/trainee regulation
 - vocational and technical education system – Australian Qualification Framework (AQF), credentials, Australian Qualification Training Framework (AQTF)
- Monitoring of Workplace Evidence encompassing:
 - workplace exposure and practices and relationship with competency standard units
 - methods of collecting workplace evidence
 - monitoring period cycle
 - requirements of workplace evidence
 - actions taken for unsatisfactory progression
 - role of state training authority (STA)

- apprentice/learner responsibilities
- employer responsibilities
- **RTO Policies encompassing:**
 - apprentice/Learner Responsibilities
 - teachers/Trainers Responsibilities
 - absenteeism
 - off-Job component assessment specifications
 - on-Job component assessment specifications
 - qualification completion requirements and award
 - advanced standing and/or RPL
 - result review procedures
- **Apprentice/Learner Discipline Policy encompassing:**
 - apprentices/Learners rights
 - apprentice/Learner responsibilities
 - breaches of discipline
 - types of penalties Apprentice/Learner Responsibilities
- **Attendance at the Vocational and Technical Education Centre encompassing:**
 - importance of attendance
 - record management of attendance
 - attendance cards
 - advice to employer of absences
- **Fire and Emergencies at the Vocational and Technical Education Centre encompassing:**
 - designated fire and emergency exists
 - procedures in the event of a fire
 - evacuation procedures
 - assembly points importance of attendance
- **Occupational Health and Safety at the Vocational and Technical Education Centre encompassing:**
 - eye protection
 - foot protection
 - protective clothing
 - personal injuries
 - mobile phones and personal belonging
 - dress regulations
 - rotating machinery, designated fire and emergency exists
- **Entry Requirements encompassing:**
 - numeracy requirements
 - literacy requirements
 - vocational and technical education centre support mechanisms
 - testing and appropriate action by learner Eye protection
- **Vocational and Technical Education Centre Tour encompassing:**
 - vocational and technical education centre layout
 - building layout
 - tour of building and vocational and technical education centre

T2. Methods of monitoring and reporting competency development activities encompassing:

- RTOs responsibility to receive and monitor workplace activities of the apprentice/learner
- Industry requirements for monitoring workplace evidence
- Acceptable methods for monitoring and reporting workplace activities
- Apprentice’s/Learner’s responsibility to participate in the reporting of workplace activities
- RTOs requirements in periodically evaluating development of apprentices/learners from the workplace activities information gathered, and providing feedback and advice on areas requiring improvement
- Employers responsibilities to participate in monitoring, reporting and confirming workplace activities, and assisting in overcoming areas requiring development by the apprentice/learner
- Options for appeal or assistance from RTO or State Training Authority (STA)

T3. Enterprise work activities policies and procedures encompassing:

- Need for policies and procedures
- Scope for an industry/enterprise to establish work activity policies and procedures - policies and procedure related to safety, effective work outcomes, customer relations, conflict resolution and competency development.

Following work activities procedures

Copy and paste the following table for each element as required

Elements & Performance Criteria		Assessment event(s)			
Element(s)	PC No	Performance Criteria (PC)	Training Documents	Performance Monitoring	Academic Record Assessment
1.Participate in the development of a personal competency development plan.	1.1	The nature of competency-based training is sought from discussions with appropriate persons and understood.	Training Plan		
	1.2	The responsibilities/obligations of trainees/learners, their employers, trainers and assessors in a competency-based development program are sought from discussions with appropriate persons and understood.	Training Plan		
	1.3	Competencies to be achieved in a personal	Training Plan		

Elements & Performance Criteria		Assessment event(s)			
Element(s)	PC No	Performance Criteria (PC)	Training Documents	Performance Monitoring	Academic Record Assessment
		competency development plan are established in discussions with appropriate persons.			
	1.4	Details on how to achieve the individual competencies in the plan are sought from discussions with appropriate persons and understood.	EBS Timetables		
2. Follow a personal competency development plan.	2.1	All aspects of the competency development plan are put into practice and followed diligently	EBS Timetables	EBS Assessment and Attendance records	EBS Academic results
	2.2	Opportunities to practise skills and apply knowledge relative to a particular competency are pursued	Work Records	e-Profiling	
	2.3	Assistance is sought from appropriate persons to overcome difficulties in develop skills and apply knowledge relevant to a particular competency.	Head Teacher's advice	Regular section meetings	Regular feedback by unit teachers in the course
	2.4	Progress in competency development is self monitored against the competency development plan.	RTO Student Portal	Self monitoring of the results	RTO Academic Transcripts
	2.5	Modifications to the personal competency development plan are made in consultation with appropriate persons.	Unit and course evaluation	Assessment validation of the section	Collaboration with ASQA
	2.6	Trainee/learners responsibility for periodic and timely reporting of competency development activities is followed.	Trainees' entries of e-Profiling	RTO Attendance Card	Report to employers

Add rows to the following table as required

Performance Evidence	Training Documents	Performance Monitoring	Academic Record Assessment
Competency Development (Training) Plans	EBS records		
Qualification Structure	Semester Timetable		
Responsibilities	Information to students	Course documents provided to students and accepting feedback and providing the guidance and advice by head teacher and teachers	
Electrotechnology Industry Career Opportunities	RTO Career service	Circulating job opportunities information	
Industry customs and practices	Regular industry Liaison		
Monitoring of Workplace Evidence	Workplace document collection for relevant units		
RTO Policies	RTO Policies	Electrical Trades Section Disciplines	
Apprentice/Learner Discipline Policy	Students Discipline Instructions issued by Electrical Trades Section	Reporting the absentees to the employers	Monitoring of both paper based and EBS Roll books
Attendance at the Vocational and Technical Education Centre	Monitoring of both paper based and EBS Roll books	EBS Students Attendance and Class Registers	Reporting the absentees to the employers
Fire and Emergencies at the Vocational and Technical Education Centre	Fire, Evacuation and Lockdown instruction of RTO	RTO Emergency Drills	Electrical Trades Section Electrical and Fire Safety Plans and Instructions

Performance Evidence	Training Documents	Performance Monitoring	Academic Record Assessment
Occupational Health and Safety at the Vocational and Technical Education Centre		Electrical Trades Section Safety Instruction, Safety gear instructions	Assessing pre-requisites regarding OHS Completion of OHS Units in the course
Entry Requirements	As per Course Information	RTO Course Information Website Accepting feedback and providing the guidance and advice by head teacher and teachers	Pre-requisite check before allowing the student to do the specific unit.
Vocational and Technical Education Centre Tour	Students orientation session		
Methods of monitoring and reporting competency development activities	RTO Academic Transcript	Regular checking of class registers and students attendance	Checking of academic records and entry of data for this unit in EBS by Head Teacher or nominated teacher

Add rows to the following table as required

Knowledge Evidence	Training Documents	Performance Monitoring	Academic Record Assessment
Occupational Health and Safety workplace procedures and practices, including the use of risk control measures			Completion of UEENEEE101A
Sustainable energy principles and practices			Completion of UEENEEK145A

Knowledge Evidence	Training Documents	Performance Monitoring	Academic Record Assessment
Australian Qualification Framework (AQF), credentials, Australian Qualification Training Framework (AQTF)	Providing the information in RTO Website	Providing the information by Teaching Section	
Role of state training authority (STA)	Providing the information in RTO Website	Providing the information by Teaching Section	
Anti Discrimination legislation, regulations, polices and workplace procedures	Providing the information in RTO Website	Providing the information by Teaching Section	

Add rows to the following table as required

Assessment Conditions	Training Documents	Performance Monitoring	Academic Record Assessment
Students performance in monitoring of progress	Throughtout the course	Throughtout the course	At the end of each semester and before entering the result for this unit
Assessing the academic results of the students in the course	Throughtout the course	Throughtout the course	At the end of each semester and before entering the result for this unit
Liaison with employers	Throughtout the course	Throughtout the course	Throughtout the course
Assessing work place evidences and e-Profiling system	Throughtout the course	Throughtout the course	Throughtout the course

POWER UNITS-IS67+68

Electrical Power Systems I

IS67	Electrical Power System
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IS74	Power System Protection
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G015/ IS67+68+ IS74

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Video 1515

<http://youtu.be/VuzjXkRx4UI>

[G015\(AA\)Lesson 2-Demand factor.zip](#)

Video 1516

<http://youtu.be/cUGbxhBT-Dc>

Video 1517

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[G015\(AA\)Lesson 3-Sag.zip](#)

Video 1518

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[G015\(AA\)Lesson 5-UG Cable.zip](#)

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[G015\(AE\)Lesson 1-Power system protection scheme.zip](#)

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[G015\(AE\)Lesson 2-Differential relay.zip](#)

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[G015\(AE\)Lesson 4-Three phase differential relay.zip](#)

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Video 1536

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 G015(AA)Lesson 3-Sag
 G015(AA)Lesson 4-OH Line mechanical design
 G015(AA)Lesson 5-UG Cable
 G015(AA)Lesson 6-Voltage control
 G015(AE)Lesson 1-Power system protection scheme
 G015(AE)Lesson 2-Differential relay
 G015(AE)Lesson 3-Over current & earth fault protection
 G015(AE)Lesson 4-Three phase differential relay
 G015(AE)Lesson 5-Current time grading
 G015(AE)Lesson 6-Instrumentation transformer
 G015(AE)Lesson 7-CT PT
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 G015(AG)Lesson 7-Short circuit in alternator
 G015(AG)Lesson 8-Corona
 G015(AG)Lesson 9-Power surge
 G015(AG)Lesson 10-Static Var Compensation
 G015(AG)Lesson 11-PF Control+Fuel cell

Electrical Power Systems II

IS68+69	Electrical Energy Supply System
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G037+G038+G039 Part 1/2/3+IS69

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Power System (2)

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Video 1557

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[G037+G038+G039 Lesson 3-Power System Control Equipments.zip](#)

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[G037+G038+G039 Lesson 4-Auxiliary System+Harmonic.zip](#)

Video 1560

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Video 1565

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[G037+G038+G039 Lesson 8-Turbine Control+Power Line Earthing.zip](#)

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Video 1569

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Video 1579

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[G037+G038+G039 Lesson 20-Power Generation + Generator Control.zip](#)

Video 1584

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[G037+G038+G039 Lesson 21-Turbine Control+ Digital Excitation.zip](#)

Video 1585

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Video 1586

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[G037+G038+G039 Lesson 22-Power System Protection.zip](#)

Video 1587

<http://youtu.be/c6iXRwfCYBU>

[G037+G038+G039 Lesson 23-Switch Gear.zip](#)

Video 1588

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Video 1589

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 G037+G038+G039 Lesson 2-Site Earthing
 G037+G038+G039 Lesson 3-Power System Control Equipments
 G037+G038+G039 Lesson 4-Auxiliary System+ Harmonic
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H111

[DC Power supplies](#)

[H011 Lesson 1 DC Power supply principle.zip](#)

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[H011 Lesson 3 Current limiter.zip](#)

Video 1592

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Video 1593

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The links contain the following lessons

H011 Lesson 1 DC Power supply principle

H011 Lesson 2 Load regulation

H011 Lesson 3 Current limiter

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KS01-EF102A

Telecommunications telephony and switching

Evidence shall show an understanding of telecommunications telephony and switching, applying safe working practices and relevant Standards, Codes and Regulations to an extent indicated by the following aspects:

T1. Principles and characteristics of sound encompassing:

- Sound characteristics
- Sound waves
- Distortion
- Attenuation
- Resonant frequency
- Sound pressure levels

Video 1594

https://www.youtube.com/watch?v=-_xZZt99MzY

T2. Transmission of sound encompassing:

- Compression
- Rarefaction
- Sound transmission
- Wavelength
- Inverse square rule (attenuation)
- Basic telephone construction

Video 1595

<https://www.youtube.com/watch?v=GkNJvZINSEY>

Video 1596

<https://www.youtube.com/watch?v=32q5x-81H5Q>

T3. Telephone transmitters encompassing:

- Telephone transmitter functions
- Telephone transmitter types
- Capacitive transmitters
- Moving coil transmitters

Video 1597

<https://www.youtube.com/watch?v=s9DftCxezgY>

T4. Telephone receivers encompassing:

- Telephone receiver functions
- Telephone receiver types

Video 1598

<https://www.youtube.com/watch?v=lqXE0Bs-auA>

Video 1599

<https://www.youtube.com/watch?v=1bMxOihQinM>

Video 1600

<https://www.youtube.com/watch?v=SG21V1iGmvs>

T5. Telephone circuits encompassing:

- Components
- Operation of basic telephone
- Operation of basic facsimile machine
- Cables used, colour and termination types

Video 1601

<https://www.youtube.com/watch?v=3c3W1EHfThQ>

Video 1602

<https://www.youtube.com/watch?v=Tahfluke6cU>

Video 1603

<https://www.youtube.com/watch?v=9Y8Ao1b5ceQ>

Video 1604

https://www.youtube.com/watch?v=h_yQHWHkfWE

Video 1605

<https://www.youtube.com/watch?v=5pYTa3Lpjz4>

T6. Overview of earthing and protection encompassing:

- Function of earthing
- Earthing requirements

Video 1606

https://www.youtube.com/watch?v=zLW_7TPf310

T7. Customer switching systems (CSS), interfaces and devices encompassing:

- System Distribution Frames (SDF)
- Power fail and line interface requirements (e.g. Indial, ISDN, Rotary Groups, Extension, Tie-line circuits and the like)

Video 1607

<https://www.youtube.com/watch?v=QOTQic5231w>

Video 1608

<https://www.youtube.com/watch?v=htl13hWsjZw&list=PLFE5645F56F0839BC&index=15>

Video 1609

<https://www.youtube.com/watch?v=fukXUnLVCuE>

Video 1610

<https://www.youtube.com/watch?v=xZePwin92cI>

Video 1611

<https://www.youtube.com/watch?v=O669rW3nzxo>

T8. Installation of CSS encompassing:

- Documentation
- CPR rules
- CSS interfaces
- CPR rules for SDFs

Video 1612

<https://www.youtube.com/watch?v=YqHQtTFj74w>

Video 1613

<https://www.youtube.com/watch?v=w16Tp9oaOk4>

Video 1614

<https://www.youtube.com/watch?v=B6zBaX2Uzuo>

Video 1615

<https://www.youtube.com/watch?v=YQYJUeokqOY>

Video 1616

https://www.youtube.com/watch?v=TWyTK_HQO10

Video 1617

https://www.youtube.com/watch?v=-D5mWO9_vLI

T9. Installation and termination requirements overview encompassing:

- ACMA regulations and requirements
- Technical standards
- Programming of CSS
- Metering and Public/Pay Phones

Video 1618

<https://www.youtube.com/watch?v=EzFuk0dN0XY>

Video 1619

https://www.youtube.com/watch?v=y3v-x_TqIcM

Video 1620

<https://www.youtube.com/watch?v=LvgZICxkNXM>

Video 1621

<https://www.youtube.com/watch?v=TvPh4uG33dQ>

Video 1622

<https://www.youtube.com/watch?v=jyWAO9WpC3w>

Video 1623

<https://www.youtube.com/watch?v=p9eCINjjbh8>

Video 1624

<https://www.youtube.com/watch?v=qVgXvel8zlc>

Video 1625

<https://www.youtube.com/watch?v=307JDhxSIZQ>

T10. Hazards encompassing:

- Electronic components and circuits
- Printed circuit boards
- Physical
- Static discharge
- Chemical
-

Video 1626

<https://www.youtube.com/watch?v=BwyDCHf5iCY>

KS02-EF102A

Telecommunications Open CPR regulations

Evidence shall show an understanding of telecommunications Open CPR regulations, applying safe working practices and relevant Standards, Codes and Regulations to an extent indicated by the following aspects:

T1 Cabling provider rules encompassing:

- Cabling registrars, auditors and inspectors
- Mandatory and voluntary requirements for cabling work
- Registration

Video 1627

<https://www.youtube.com/watch?v=BG2vB30v8dM>

Video 1628

<https://www.youtube.com/watch?v=JIBhqpsBtw8>

Video 1629

https://www.youtube.com/watch?v=ey_DCXT9800

Video 1630

<https://www.youtube.com/watch?v=r-Yc3Ib5JH4>

T2 General installation requirements encompassing:

- Cabling provider rules requirements
- Earth potential rise
- Catenary cabling systems
- Optical fibre and coaxial cabling systems
- Conduits
- Surge suppression devices

Video 1631

<https://www.youtube.com/watch?v=jPaHVe1U1SM>

Video 1632

<https://www.youtube.com/watch?v=FTv0Blk-EXE>

Video 1633

<https://www.youtube.com/watch?v=AvuAEYSMFQI>

- T3 Cable distribution devices encompassing:
- Cable distribution devices
- Clearances
- General requirement

Video 1634

<https://www.youtube.com/watch?v=11bCD2L-Gus>

- T4 Indoor cabling encompassing:
- General requirements for indoor cabling
- Required minimum clearances
- Damp situations
- Cables in lift and hoist shafts

Video 1635

<https://www.youtube.com/watch?v=o61OPunnoOg>

Video 1636

<https://www.youtube.com/watch?v=BK6OPgnNcQk>

- T5 Underground cabling encompassing:
- Requirements for underground cabling
- Protection of underground cabling
- Segregation from other services

Video 1637

<https://www.youtube.com/watch?v=JmYT0FTjyHc>

Video 1638

<https://www.youtube.com/watch?v=anJy3VZ2Ch8>

Video 1639

<https://www.youtube.com/watch?v=5vGGVPxBVuY>

- T6 Aerial cabling encompassing:
- Requirements for aerial cabling
- Minimum clearances
- Segregation requirements

Video 1640

<https://www.youtube.com/watch?v=oqMbLVCOYOo>

Video 1641

https://www.youtube.com/watch?v=ey_DCXT9800

Video 1642

<https://www.youtube.com/watch?v=pIlBINW7sOo>

Video 1643

<https://www.youtube.com/watch?v=jPaHVe1U1SM>

Video 1644

<https://www.youtube.com/watch?v=7SRIWibkyPI>

Video 1645

<https://www.youtube.com/watch?v=jZOg39v73c4>

- T7 Earthing encompassing:
- Earthing systems
- Earthing of equipment
- Equipotential bonding
- T8 Miscellaneous regulations encompassing:
- Cabling in heritage buildings
- Cabling in public places
- Cabling in hazardous areas

Video 1646

<https://www.youtube.com/watch?v=7KYe2ZifTZw>

Video 1647

<https://www.youtube.com/watch?v=OnTUayAE12Q>

Video 1648

https://www.youtube.com/watch?v=KR5N1_xGA8k

Video 1649

<https://www.youtube.com/watch?v=FYwBCdb19AM>

KS03-EF102A

Telecommunications installation practices

Evidence shall show an understanding of telecommunications installation and maintenance practices, applying safe working practices and relevant Standards, Codes and Regulations to an extent indicated by the following aspects:

T1 Telecommunication cable types encompassing:

- Construction
- Characteristics
- Applications
-

Video 1650

<https://www.youtube.com/watch?v=nQ5XacZHngA>

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Video 1651

<https://www.youtube.com/watch?v=Gg1aFmsKQgk>

T2 Cable identification encompassing:

- Plans and drawing
- Labelling
- Documentation
-

Video 1652

<https://www.youtube.com/watch?v=D3WLsZyvxgw>

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Video 1653

<https://www.youtube.com/watch?v=1QXBdo-kXo8>

•

Video 1654

<https://www.youtube.com/watch?v=rpECvTyCs9E>

•

Video 1655

<https://www.youtube.com/watch?v=cYezvfEZK0Y>

•

Video 1656

<https://www.youtube.com/watch?v=5pYTa3Lpjz4>

T3 Building structures, materials and sequencing encompassing:

- Building types
- Timber frame
- Brick veneer
- Double brick
- Metal frame
- Parts of a building
- Sequence of construction
- Stages of construction where electrical work is completed
- Environmental and heritage awareness purpose and regulations

•

Video 1657

<https://www.youtube.com/watch?v=xshqj5QjnI>

T4 Cable installation encompassing:

- Hazards
- Cable damage prevention
- Cable dispensers
- Cable enclosures
- Types
- Fixing
- Regulations
- Distribution boxes and back mounts
- Systems

•

Video 1658

<https://www.youtube.com/watch?v=9qyjYYepeel>

•

Video 1659

<https://www.youtube.com/watch?v=bZ7CPRpJvHI>

T5 Termination Boundaries and devices encompassing:

- Electrical connections
- Hazards
- Regulations
-

Video 1660

<https://www.youtube.com/watch?v=qPsgJelA9Tk>

T6 Cable preparation and terminations and hauling mechanisms encompassing:

- Indoor Methods
- Outdoor Methods

Video 1661

•
<https://www.youtube.com/watch?v=Gg1aFmsKQgk>

T7 Earthing concepts encompassing:

- MEN System
- Communication Earthing System
- Telecommunication Reference Conductor
- Earthing Cable Shield
- Testing
- Earth Barriers
- Purpose of earth testing instruments
- Earth Potential Rise
- Earthing test procedures
- Interpretation of results

Video 1662

<https://www.youtube.com/watch?v=w9dWpCabGH0>

Video 1663

https://www.youtube.com/watch?v=KR5N1_xGA8k

T8 Surge suppression and system encompassing:

- Purpose
- Types
- Operation
- Installation Techniques
- Earthing requirements

Video 1664

<https://www.youtube.com/watch?v=mRDoF5Gi1Mw>

Video 1665

<https://www.youtube.com/watch?v=1J9hsHnWygk>

Video 1666

<https://www.youtube.com/watch?v=7PXBHwbrEWM>

Video 1667

<https://www.dailymotion.com/video/x76wz1s>

Video 1668

<https://www.youtube.com/watch?v=hLxJWpJNmkc>

Video 1669

<https://www.youtube.com/watch?v=NnvtTsa6AKQ>

Video 1670

<https://www.youtube.com/watch?v=nkYmillGSzw>

Video 1671

<https://www.youtube.com/watch?v=-ehw6uZOOfw>

Video 1672

<https://www.youtube.com/watch?v=qCc567gUBQQ>

Video 1673

<https://www.youtube.com/watch?v=33XBMj9jHHc>

T9 Cable shielding and interference encompassing:

- EMI/RFI Principles
- Sources
- Reduction Techniques
- Earthing Cable Shields

Video 1674

<https://www.youtube.com/watch?v=DQxF414YpZQ>

Video 1675

<https://www.youtube.com/watch?v=m8nlsk2zpqA>

Video 1676

<https://www.youtube.com/watch?v=r3AyG8R5ce4>

Video 1677

<https://www.youtube.com/watch?v=UHmWL2rCkAQ>

Video 1678

<https://www.youtube.com/watch?v=DOoyrsi6ctk>

T10 Telecommunication earthing systems encompassing:

- Hazards
- Solutions
- Installation
- Termination
- Line taps

Testing

Video 1679

<https://www.youtube.com/watch?v=G9CjydiUkAI>

Video 1680

https://www.youtube.com/watch?v=NP9Jbdi_k6s

Video 1681

<https://www.youtube.com/watch?v=w9dWpCabGHO>

Practical

Data Cabling

https://www.youtube.com/watch?v=ey_DCXT9800

Dimmer Light Installation

https://www.youtube.com/watch?v=0yVxQp_oqSQ

Install Sub Panel

<https://www.youtube.com/watch?v=bDuOVe19C8M>

Installing EMT+MC Cable

<https://www.youtube.com/watch?v=HhwEwbgZFA4>

Installing Feeder Wire from main busbar

https://www.youtube.com/watch?v=RWJGor5_iVY&has_verified=1

<https://www.youtube.com/watch?v=7ELUm1TW2HY>

Main Switch Board & Socket outlet Installation

<https://www.youtube.com/watch?v=WP0pN492heE>

<https://www.youtube.com/watch?v=ISwzgVFFfM0>

Pulling Cable

https://www.youtube.com/watch?v=9kK4IugMIn0&list=PLtFKmtC_i8xJSjuLdr6LyVJ-s-F9QK0b2

<https://www.youtube.com/watch?v=9kK4IugMIn0>

Switchboard Circuit Breaker Installation

<https://www.youtube.com/watch?v=JSo2cW4RowI>

<https://www.youtube.com/watch?v=n33S60qmU5w>

<https://www.youtube.com/watch?v=6rwXNw8505s>

UG Conduit Installation

<https://www.youtube.com/watch?v=0enPge0i7kY>

Use fish tape to pull the cable

<https://www.youtube.com/watch?v=JAjRX3HgLE>

Wiring Trunking Assembly

<https://www.youtube.com/watch?v=hzyPkHS5gZM>

Click [HERE](#) to download practicals

UEENEE003

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Programmable Logic Controllers Notes

Programmable Logic Controller Training Course

www.iqytechnicalcollege.com/Programmable Logic Controller Training Course.pdf

PLC Lecture Videos for the above note book

PLC Lecture 1

<https://youtu.be/MboEBEUWJTg>

PLC Lecture 2

https://youtu.be/3Wx_eZ8NOcM

Process Control

	Process Control System
--	--

1006+ H & I units in UEE11

UEENEE127A	Analyse complex electronic circuits controlling fluids
UEENEE139A	Diagnose and rectify faults in digital controls systems
UEENEE101A	Use instrumentation drawings, specification, standards and equipment manuals
UEENEE116A	Assemble, enter and verify operating instructions in microprocessor equipped devices
UEENEE138A	Provide solutions to extra low voltage (ELV) electro-pneumatic control systems and drives
UEENEE140A	Plan the electrical installation of integrated systems
UEENEE141A	Develop electrical integrated systems
UEENEE150A	Develop, enter and verify discrete control programs for programmable controllers
UEENEE142A	Develop an electrical integrated system interface for access through a touch screen
UEENEE143A	Develop access control of electrical integrated systems using logic-based programming tools
UEENEE144A	Develop interfaces for multiple access methods to monitor, schedule & control electrical integrated
UEENEE151A	Develop, enter and verify word and analogue control programs for programmable logic controllers.

UEENEE152A		Develop, enter and verify programs in Supervisory Control and Data Acquisition systems
UEENEEH147A		Assess electronic apparatus compliance
UEENEEH184A		Modify digital signal processing (DSP) based sub-systems
UEENEEH185A		Design signal-conditioning subsystems
UEENEEH188A		Design and develop electronics - computer systems projects
UEENEE123A		Design electronic control systems
UEENEE128A		Set up and configure controls on complex fluid systems
UEENEE129A		Set up electronically controlled mechanically operated complex systems
UEENEE141A		Develop electrical integrated systems
UEENEE150A		Develop, enter and verify discrete control programs for programmable controllers
UEENEE119A		Set up industrial field control devices
UEENEE120A		Provide solutions to problems in industrial control systems
UEENEE124A		Fault find and repair analogue circuits and components in electronic control systems
UEENEE125A		Provide solutions to fluid circuit operations
UEENEE126A		Provide solutions to pneumatic-hydraulic system operations
UEENEE139A		Diagnose and rectify faults in digital controls systems
UEENEE142A		Develop an electrical integrated system interface for access through a touch screen
UEENEE143A		Develop access control of electrical integrated systems using logic-based programming tools
UEENEE144A		Develop interfaces for multiple access methods to monitor, schedule & control electrical integrated
UEENEE148A		Solve problems in single phase electronic power control circuits
UEENEE149A		Solve problems in polyphase electronic power control circuits
UEENEE151A		Develop, enter and verify word and analogue control programs for programmable logic controllers.
UEENEE152A		Develop, enter and verify programs in Supervisory Control and Data Acquisition systems
UEENEE127A		Analyse complex electronic circuits controlling fluids
UEENEE157A		Configure and maintain industrial control system networks

Page 429 to 472 of
[www.highlightcomputer.com/Video Lessons.pdf](http://www.highlightcomputer.com/Video%20Lessons.pdf)
Process Control+ Digital Electronics +Signal Processing

[I006 Part 1-Process Control-Signal Conditioning.zip](#)

<http://youtu.be/C4IVgfKuSW4>

[I006 Lesson 1 Process control Intro+Signal conditioning.zip](#)

[I006 Lesson 2 Op-amp in process control.zip](#)

<http://youtu.be/AXIcU51ps84>

[I006 Lesson 3 Pnuematic.zip](#)

<http://youtu.be/C6sxFVofvKE>

[I006 Lesson 3+H012 Lesson 1 Digital principle+Logic gates.zip](#)

<http://youtu.be/C6sxFVofvkE>
http://youtu.be/EsD_AFu-ivk

[I006 Lesson 4+H012 Lesson 2 Equivalent gate.zip](#)

<http://youtu.be/vesmolTetEc>
<http://youtu.be/YZR8jYsyLhk>

[I006 Part 4-Transducers.zip](#)

[I006 Lesson 5+H012 Lesson 3 Number system.zip](#)

<http://youtu.be/3tkPLJOGK2w>
<http://youtu.be/f9Zj|zy0M4M>

[I006 Lesson 6+H012 Lesson 4 Binary subtraction.zip](#)

http://youtu.be/_Q3pRlcLCo8
<http://youtu.be/8BcUJ7BDKIl>

[I006 Lesson 7+H012 Lesson 5 Endecoder+Decoder.zip](#)

<http://youtu.be/8BcUJ7BDKIl>

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[I006 Lesson 9+H012 Lesson 7 Shift register+Data latches.zip](#)

<http://youtu.be/Dno6mTqdSeg>

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<http://youtu.be/q|DOa4T4mPM>
<http://youtu.be/cnB8WaUHK9k>

[I006 Lesson 11+H012 Lesson 9 Display.zip](#)

<http://youtu.be/EGSuf2BKrSo>

<http://youtu.be/imBgGNrI7L4>

[I006 Lesson 12 Digital signal processing.zip](#)

<http://youtu.be/nF6exJcU0jc>

[I006 Lesson 13 Digital control design.zip](#)

<http://youtu.be/ggcyIffa0yI>

<http://youtu.be/KknQ8yoLsck>

[I006 Lesson 14 DAC.zip](#)

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<http://youtu.be/Tjw-UKimmZE>

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http://youtu.be/GvF_pUQH2lk

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<http://youtu.be/cByb6RpKJiA>

http://youtu.be/10aYqRn7_mg

[I006 Lesson 18 Thermocouple.zip](#)

http://youtu.be/QkcVEIqPv_4

[I006 Lesson 19 Temperature measurement.zip](#)

http://youtu.be/TLgQN4tZM_1

[I006 Lesson 20 Proportional mode.zip](#)

<http://youtu.be/nJZ7lQfXQVc>

<http://youtu.be/6l08dJUQV8l>

[I006 Lesson 21 Industrial transducer.zip](#)

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[I006 Lesson 22 Force measurement.zip](#)

<http://youtu.be/BlKpRw3Wszs>

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<http://youtu.be/qw9G6enld4E>

[I006 Lesson 24 Closed loop control.zip](#)

<http://youtu.be/R37Dcbsf3Fo>

<http://youtu.be/kV2dfbkPT5o>

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<http://youtu.be/fEfwatBTZxE>

<http://youtu.be/f2DrTcYShog>

[I006 Lesson 26 PCM.zip](#)

<http://youtu.be/ZiblAqJEHlo>

[I006 Lesson 27 Control loop.zip](#)

<http://youtu.be/uvKx0xmy2Lo>

http://youtu.be/lo_dSNA03IA

[I006 Lesson 28 Strain gauge+Piezo electric.zip](#)

<http://youtu.be/tiBHaJsTd-E>

[I006 Lesson 29 Light transducer.zip](#)

<http://youtu.be/3y4kNvPMxIU>

<http://youtu.be/Xc918QLN1PY>

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I006 Lesson 1 Process control Intro+Signal conditioning
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 I006 Lesson 3+H012 Lesson 1 Digital principle+Logic gates
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 I006 Lesson 17 Micro processor compatible DAC
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 I006 Lesson 20 Proportional mode
 I006 Lesson 21 Industrial transducer
 I006 Lesson 22 Force measurement
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 I006 Lesson 24 Closed loop control
 I006 Lesson 25 Electronics signal in process control
 I006 Lesson 26 PCM
 I006 Lesson 27 Control loop
 I006 Lesson 28 Strain gauge+ Piezo electric
 I006 Lesson 29 Light transducer

PLC Textbooks

A Practical Guide to Implementing S7-300_S7-400 Programmable Logic Controllers

http://www.iqytechnicalcollege.com/A Practical Guide to Implementing S7-300_S7-400 Programmable Logic Controllers.pdf

Automating with SIMATIC_ Controllers

www.iqytechnicalcollege.com/Automating_with_SIMATIC_Controllers.pdf

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Mechatronic System Control,

<https://www.iqytechnicalcollege.com/Mechatronic%20System%20Control,.pdf>

Mitsubishi FX Programmable Logic Controllers_ Applications and Programming

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Programmable Controllers Theory and Implementation

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[www.iqytechnicalcollege.com/Programmable Logic Controllers.pdf](http://www.iqytechnicalcollege.com/Programmable%20Logic%20Controllers.pdf)

Programmable Logic Controllers_ Programming Methods

[www.iqytechnicalcollege.com/Programmable Logic Controllers_ Programming Methods.pdf](http://www.iqytechnicalcollege.com/Programmable%20Logic%20Controllers_%20Programming%20Methods.pdf)

Programmable Logic Controllers-Fourth Edition

[www.iqytechnicalcollege.com/Programmable Logic Controllers-Fourth Edition.pdf](http://www.iqytechnicalcollege.com/Programmable%20Logic%20Controllers-Fourth%20Edition.pdf)

Rockwell _ Allen-Bradley PLC-5 Manual

[www.iqytechnicalcollege.com/Rockwell _ Allen-Bradley PLC-5 Manual.pdf](http://www.iqytechnicalcollege.com/Rockwell_%20Allen-Bradley%20PLC-5%20Manual.pdf)

Technician Guide to Programmable Controllers

[www.iqytechnicalcollege.com/Technician Guide to Programmable Controllers.pdf](http://www.iqytechnicalcollege.com/Technician%20Guide%20to%20Programmable%20Controllers.pdf)

PLC book for Allen Bradley PLCs

[http://www.iqytechnicalcollege.com/PLC book for Allen Bradley PLCs.pdf](http://www.iqytechnicalcollege.com/PLC%20book%20for%20Allen%20Bradley%20PLCs.pdf)

SCADA

Practical SCADA for Industry

[www.iqytechnicalcollege.com/Practical SCADA for Industry.pdf](http://www.iqytechnicalcollege.com/Practical%20SCADA%20for%20Industry.pdf)

Lecture Videos for the above note book

SCADA Lesson 1

<https://youtu.be/lxzdAGIKltM>

SCADA Lesson 2

<https://youtu.be/6F5cLB25SII>

SCADA Lesson 3

<https://youtu.be/4pXjjKjGIXg>

SCADA Textbooks

Delta SCADA System User Manual

[www.iqytechnicalcollege.com/Delta SCADA System User Manual.pdf](http://www.iqytechnicalcollege.com/Delta%20SCADA%20System%20User%20Manual.pdf)

Practical SCADA for Industry

[www.iqytechnicalcollege.com/Practical SCADA for Industry.pdf](http://www.iqytechnicalcollege.com/Practical%20SCADA%20for%20Industry.pdf)

SCADA System Application Guide -Allen-Bradley

[www.iqytechnicalcollege.com/SCADA System Application Guide -Allen-Bradley.pdf](http://www.iqytechnicalcollege.com/SCADA%20System%20Application%20Guide%20-%20Allen-Bradley.pdf)

SCADA System Literature Library

[www.iqytechnicalcollege.com/SCADA System Literature Library.pdf](http://www.iqytechnicalcollege.com/SCADA%20System%20Literature%20Library.pdf)

Scada_ Supervisory Control And Data Acquisition

[http://www.iqytechnicalcollege.com/Scada_ Supervisory Control And Data Acquisition.pdf](http://www.iqytechnicalcollege.com/Scada_%20Supervisory%20Control%20And%20Data%20Acquisition.pdf)

Supervisory Control and Data Acquisition SCADA Systems

[http://www.iqytechnicalcollege.com/Supervisory Control and Data Acquisition SCADA Systems.pdf](http://www.iqytechnicalcollege.com/Supervisory%20Control%20and%20Data%20Acquisition%20SCADA%20Systems.pdf)

Upgrade_Guide_2018 Citect SCADA

[www.iqytechnicalcollege.com/Upgrade_Guide_2018 Citect SCADA.pdf](http://www.iqytechnicalcollege.com/Upgrade_Guide_2018%20Citect%20SCADA.pdf)

9 BAE613 Mechanical Instrumentation Process

<http://www.triplc.com/edutrilogi.htm>

<http://www.triplc.com/iTrilogi6Edu>

Once you have downloaded and run the SetupTL6Edu.exe, you will be prompted for a setup password. Please enter the following:

Setup Password: LadderBasic2009

Download Procedure

(last update: May 2, 2016)

2. **Download JRE:** This new versions of i-TRiLOGI (Educational) 6.51 and 7.11 requires **32-bit** Java 2 Run Time Environment (JRE) >= version 1.6 before the i-TRiLOGI program can run. Many newer PCs may have already been shipped with a version of Java Run-Time Environment (JRE). If you do not already have any JRE installed on your PC or you only have a 64-bit JRE on your PC, then please download the suitable JRE version for your operating system from www.javasoft.com
3. **Download the i-TRiLOGI (Educational) Setup files** as shown in the following link:

i-TRiLOGI Version 6 & 7 (Ladder + BASIC) - [SetupTL7Edu.exe](#)

Important Notes:

a) The **SETUP PASSWORD** required is provided in the **SAME EMAIL** that you received that led you to this web page. Once Installation is completed you can run the program from "Start -> i-TRiLOGI (Educational) 6 & 7.

b) We recommend you install the program in the default folder (C:\TRiLOGI). **DO NOT** install in the "C:\Program Files" folder. This is because i-TRiLOGI stores its configuration and data files into the subfolder within the TRiLOGI folder and Windows normally block the program from writing into the "C:\Program Files" folder unless it is run as administrator.

- **Online Help**
files: <http://www.triplc.com/TRiLOGI/Help/contentmenu.htm>
- **Download the TL6 and TL7 Reference Manual**
from: <http://www.triplc.com/documentations.htm>

How is Educational Version different from Production version?

The Educational versions of TRiLOGI are complete (not a crippled version) software package for learning about PLC programming and for users to evaluate the power of Ladder Logic or Ladder+BASIC software programming. There is no performance limitation and you are able to create and save your programs on a local hard disk, simulate the programs and print them out as hardcopies. The program files you created using the Educational version are identical to that of the Production version so you can write and test your entire program to make sure that it can do what you want before purchasing the PLCs for actual applications!

The Educational version of TRiLOGI is almost identical in every aspect to the Production version of TRiLOGI, except that:

2. ITRiLOGI (Educational) does not include the web server: "TLServer" which can turn your PLC into a web server to allow you to remotely load the TRILOGI as an applet using a web browser so that you can remotely program/monitor your PLC via the Internet.

- it does not allow you to connect to a PLC or the TLServer for programming and monitoring of PLC operation.

However, we do provide mock-up simulated sessions for program transfer and on-line monitoring so that you can have a feel of the actual process of PLC programming and on-line monitoring.

To use, also download Java and install it so that you can use Trilogy 32 bit program on your Windows 7/ 8/ 10 64 bit system

<https://www.java.com/en/download/win10.jsp>

E book Manual

You may download the zip file from the following link:

<http://www.automationmart.com/document/PLCProgramming.zip>

Once you have downloaded, you may unzip the PDF file "PLCProgramming.pdf and you will be prompted for a password. Please use the following:

Decrypt Password:TriLogiPLCBook

VIDEOS

1/BASIC PLC Full Lecture

<https://youtu.be/ic9crSVVF9Q>

2/Learn PLC

<https://youtu.be/r5vmcw0uckg>

3/Basic of PLC

<https://youtu.be/vprLiEKQ1gU>

4/Lesson 1-- i-TRiLOGI Tutorial - Getting Started

<https://youtu.be/dBxI51HoZ9c>

5/PLC programming (with TRiLOGI) Lesson 2

https://www.youtube.com/watch?v=aacT_xq7dds

6/Lesson 3 Set / Reset

<https://youtu.be/4s1LHGXDel>

7/Lesson 4 Timer

<https://youtu.be/vD7cdYz7gpg>

8/Lesson 5 PLC Simulator

<https://youtu.be/02M69PdqAXM>

9/Lesson 6 Write First PLC Program

<https://youtu.be/GC5RPBBriNI>

<https://youtu.be/y2eWdLk0-Ho>

10/Lesson 7 Counter

<https://youtu.be/147hnhemcb8>

11/Lesson 8 Shift Register

<https://youtu.be/o1P4e-6G-Kw>

<https://youtu.be/toVGF9-S9g4>

12/Lesson 9 PLC Instructions

<https://youtu.be/Cx1z-9CooS4>

13/Lesson 10 Timers

<https://youtu.be/vQjpK38qhAY>

14/PLC Processor

<https://youtu.be/xywXrN6AJGs>

SCADA

SCADA(Supervisor Control and Data Acquisition)system based on Scilab include Serial OPC Modbus Mysql,TCP/IP interface, and PID simulation, FUZZY control and ect...

SCADA system is a free software application from the Other subcategory, part of the Development category. The app is currently available in English and it was last updated on 2006-12-16. The program can be installed on WinXP.

SCADA system (version 1.1) is available for download from our website. Just click the green Download button above to start. Until now the program was downloaded 3481 times. We already checked that the download link to be safe, however for your own protection we recommend that you scan the downloaded software with your antivirus.

<https://laquisscada.com/instale1.php>

Video

15/ Laquisscada Tutorial

<https://youtu.be/qtCxtN9RVH4>

I unit	Process Control System
UEE07 UEENEEI006B Solve problems in process controllers, transmitters and converters	UEEIC0005 Configure and maintain industrial control system networks*

[Pressure Flow Pnuematics](#)

[Temperature Measurement](#)

[Analog Digital Signal Conditioning](#)

[PLC Program](#)

[PLC](#)

[Process Control](#)

AUSTRALIAN ELECTRICIAN PLC RESOURCES

TEXTBOOKS FOR PROGRAMMABLE LOGIC CONTROLLER

PLC Textbook

[www.iqytechnicalcollege.com/PLC Textbook.pdf](http://www.iqytechnicalcollege.com/PLC%20Textbook.pdf)

[PLC Basic Teaching Guide](#)

[PLC Basic Student Workbook](#)

[PLC1 Teaching Guide](#)

[PLC 1 Student Workbook](#)

[Advanced PLC Teaching Resources](#)

[Advanced PLC Applications Student Workbook](#)

[Advanced PLC Simen](#)

[PLC Simen Supplement](#)

[Advanced PLC Symac](#)

[Advanced PLC Toshiba](#)

[CITECT SCADA](#)

PLC Application Assignment

[www.iqytechnicalcollege.com/PLC Application Assignment.pdf](http://www.iqytechnicalcollege.com/PLC%20Application%20Assignment.pdf)

PLC+SCADA Project Example 1

<http://www.iqytechnicalcollege.com/PLC+SCADA Project Example 1.pdf>

PLC+SCADA Project Example 2

<http://www.iqytechnicalcollege.com/PLC+SCADA Project Example 2.pdf>

PLC+SCADA Project Example 3

<http://www.iqytechnicalcollege.com/PLC+SCADA Project Example 3.pdf>

SCADA PLC Project 1

www.iqytechnicalcollege.com/SCADA PLC Project 1.pdf

SCADA PLC Project 2

www.iqytechnicalcollege.com/SCADA PLC Project 2.pdf

SCADA PLC Project 3

www.iqytechnicalcollege.com/SCADA PLC Project 3.pdf

SCADA PLC Project 4

www.iqytechnicalcollege.com/SCADA PLC Project 4.pdf

SCADA PLC Project 5

www.iqytechnicalcollege.com/SCADA PLC Project 5.pdf

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

