E & L-Nida

Courseware Series

Digital Circuits

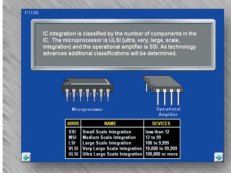
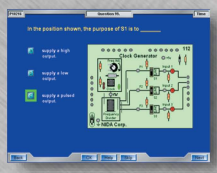
Digital Courseware That's Logical

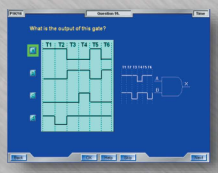
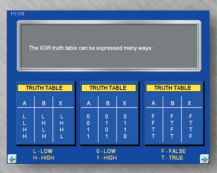
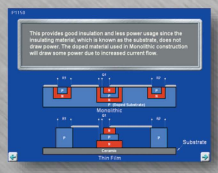
Your fundamental electronics programme wouldn't be complete without digital electronics. Information technology, computer servicing, networking, industrial maintenance, telecommunications, avionics, and even automotive electronics all require a good working knowledge of digital concepts in order for technicians to properly design, troubleshoot, and repair digital circuitry. The E & L-Nida Digital Circuits courseware provides the skills and knowledge necessary to succeed in today's digital world.

E & L-Nida Digital Circuits courseware introduces students to digital circuits, logic functions, and digital test equipment. The courseware teaches students how to analyse and probe actual digital circuits through in-depth theory and practical hands-on experiments. From simple gates to complex data distribution circuits, the E & L-Nida Digital Circuits courseware combines interactive computer based instruction with practical applications designed to assist the student through the highs and lows of digital electronics.

E & L-Nida Digital Circuits

The E & L-Nida Digital Circuits courseware is designed in a computer based format to provide students with a comprehensive, interactive courseware that logically presents digital concepts and devices. The courseware provides experiments and troubleshooting scenarios that align with the E & L-Nida Model 1404 (Series) of Digital Circuits Experiment Boards Set. The boards sets support different levels of digital experiments from basic level to University level. For determining which board set is right for your course, refer to the E & L-Nida CAI Course Chart.

Topics

Introduction to Digital Circuits
- Digital Electronics, Hardware, & Test Equipment
- Buffers & Inverters, 555 Timers, Integrated Circuits
- Electrostatic Devices, Number Systems

Digital Logic Functions
- AND, OR, NOT, NAND, NOR, XOR, & XNOR Gates
- Logic Functions, 3-State Output Buffers

Combinational Logic Functions
- Combinational Circuits, Logic Families
- Base 10 to Binary Conversions
- Binary to 7 Segment Conversions, 4 Bit Comparators

Digital Timing Circuits
- Intro to Flip-Flops, RS & Clocked RS Flip-Flops
- D-Type, J-K, and Master/Slave Flip-Flops

Register Memory Circuits
- Registers & Memory
- 4 Bit Storage & Bidirectional Shift Registers
- 8 Bit Shift Registers, 64 Bit Memory Circuits

Arithmetic Counting Circuits
- Introduction to Arithmetic Counting Circuits
- Binary Ripple & Ripple-Carry Counter/Dividers
- Presettable Binary Up/Down Counters
- 4 Bit Adders, 4 Bit Subtractors

Conversion and Data Circuits
- Introduction to Conversion & Data Circuits
- D/A & A/D Converters
- Data Selector & Data Distributor Circuits
- Digital Filters, Analogue Switches

Supporting Hardware

- Model 130E Test Console
- Model TD2000 Tec Dec
- Model 4050 Test Instrument Module
- Model 1404 (Series) Digital Circuits Experiment Boards Set

E & L-Nida Courseware Series

E & L-NIDA
Aerial Road, Llay, WREXHAM, LL12 0TU, UK.
Tel : 01978 853920 Fax : 01978 854564
info@eandl-nida.com www.eandl-nida.com

Cristiani SRL - Tecnologie e soluzioni per la Scuola
Viale Allea 39
27049 STRADELLA (PV) - Italy
Tel : 0385 42975, 42192 Fax : 0385 240077
cristiani@cristianisrl.it www.cristianisrl.it