Study Guide for
NICET Video Security Systems Technician
Level I Certification

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We support and encourage NICET certification.
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INTRODUCTION

You might be relatively new to our important and increasingly high profile industry or you may already have years of experience and field knowledge. By participating in the NICET Video Security Systems program, you will be able to earn certifications that reflect your experience, knowledge and skills.

NICET does not offer training. They offer certifications based upon successfully passing computer-based examinations and providing evidence of appropriate work experience for each level. The objective is to encourage candidates to constantly improve their job performance by obtaining additional knowledge, skills and abilities (KSA’s). The practice analysis for the Video Security Systems Technician outlining the specific KSA’s for Level I are at the end of this document.

BACKGROUND

The security industry has long sought to elevate the technical and professional competency of its technicians (service, install, etc.) and designers (sales, project managers, etc.). For manufacturers, higher levels of technical proficiency in the field mean lower tech support costs and product return rates. For installing dealers, it means lower installation and customer support costs. For end-users, it means better system performance. All of this results in a stronger, more vibrant CCTV industry.

Although training is available from many sources including manufacturers, trade organizations and professional training companies, most people do not participate unless they need to satisfy a specific training requirement or have another compelling reason.

The Security Industry Association (SIA) is an international nonprofit trade association representing electronic and physical security product manufacturers, specifiers and service providers. In 1999, a subcommittee of the SIA's CCTV Interest Group initiated a certification program to create a compelling reason to participate in training and personal professional advancement. SIA chose the National Institute for Certification in Engineering Technologies (NICET) to administer this program. NICET is a non-profit organization dedicated solely to certification. They currently administer over thirty widely respected technical certification programs.

With the help of SIA and National Systems Contractors Association, NICET formed an advisory board of subject matter experts (SMEs) comprised primarily of installing dealers from large and small companies. The advisory board developed the practice analysis that was the basis for exam questions written by a larger group of SMEs. Another group of SMEs analyzed each of the questions for suitability and fairness.

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STRUCTURE & OVERVIEW

The phrase “Closed Circuit Television” (CCTV) has served the security industry well for many years. However, with the rapid changes in technologies, including megapixel cameras, network transmission and video analytics, the SIA sub-committee felt that a more inclusive title should be used for this program, hence, the name Video Security Systems (VSS). For the purpose of this course, VSS and CCTV are interchangeable.

Video Security Systems certification is provided in two tracks: one for Technicians and one for Designers. The tracks have been carefully constructed over several years, with the help of three industry associations, five major manufacturers, dozens of expert volunteers, and hundreds of survey respondents and beta testers. Some of the more obvious benefits of this program are:

* Technicians and Designers can distinguish themselves and their qualifications.
* Employers can hire and promote with greater confidence, and market the quality of their people.
* End-users can have the assurance that those who design, install, and service their systems have met a nationally-based set of qualifications.

VSST - VIDEO SECURITY SYSTEMS TECHNICIAN

This program track includes a sequence of four levels of certification, based on the complexity of the systems being installed/serviced. NICET bases the content of the levels largely on a system classification scheme involving three system types; A, B, and C. Certification at a particular level is achieved by demonstrating knowledge of and experience in the work associated with certain types of systems.

The system classifications follow on the next page.

- Level I  In training; assists on VSS Projects
- Level II  Installs Type A Systems
- Level III  Installs Types A and B System
- Level IV  Installs Types A, B and C Systems

VSSD - VIDEO SECURITY SYSTEM DESIGNER

This program track includes a sequence of two levels of certification related to the complexity of the systems being installed/serviced.

The system classifications follow on the next page.

- Level I  Designs Types A and B Systems
- Level II  Designs Types A, B and C Systems
NICET VIDEO SECURITY SYSTEMS CLASSIFICATIONS

The following are some of the types of equipment and system characteristics that delineate Type A, Type B and Type C systems, as referred to in this content outline.

Type A Systems

These are basic systems with standard components, low bandwidth transmission, and menu-driven set-up, such as:

* Multiplexer/VCR
* Quad/VCR
* Digital Video Recorders (DVRs)
* Sequential switcher
* Single Keyboard
* Indoor/Outdoor
* Standard Cable runs not requiring repeaters of amplifiers
  .. (less than 800 ft for coaxial; less than 1500 ft for twisted pair)

Type B Systems

These systems can include specialized components, programmable controls, and high-bandwidth transmission, such as:

* PTZ
* Multiple keyboards
* Matrix interfaced with alarms, A/C, or intercom (GPI or dry contact)
* Digital video recorders with programmable, alarm-based resolution and frame rate
* Fiber transmission systems
* Low light
* Long cable runs
* Covert or portable systems
* RF modulators

Type C Systems

These systems can include PCs, serial communication, and wireless transmission, such as:

* Integrated systems / serial communications / GUI’s
* LANs / WANs
* Remote Systems
* Microwave and IR transmission
* Digital video recorders with remote interface
About the authors

Vlado Damjanovski
Vlado Damjanovski is an author, lecturer and CCTV expert, well known to the Australian and international CCTV industry. He has a degree in Electronics Engineering and Television.

Vlado has designed and commissioned many CCTV systems in Australia and around the world.

He has written three books on the topics of CCTV, some of which are translated in other languages. He conducts CCTV seminars based on his books throughout the Australia and overseas and has trained thousands of industry people.

Vlado is currently the Standards Australia CCTV Standards Sub-Committee Chairman and has been a leading proponent in the development of the first Australian CCTV standards, published in 2006.

Howard Kohnstamm
Howard Kohnstamm got his start in CCTV distribution in 1988 after a 20-year career in accounting. He discovered that most of his customers were self-taught or only received informal on the job training. There was a lack of formal CCTV training in 1988, so he asked a lot of questions and did a lot of research. What started out as an after lunch talk on common mistakes evolved into a 16-hour course “CCTV Essentials.” Since 1991, Howard has provided training to installers and designers throughout the Southeast United States.

Howard has been an active committee participant since the idea of CCTV certification was initiated by SIA many years ago. He was one of nine subject matter experts (SME) who developed the VSS practice analysis.

To maintain the integrity of the certification process, NICET does not allow active trainers to participate in the question writing process. Howard has the distinction of being the only author and trainer who is an active systems integrator, served as a NICET SME and has taken and passed all six NICET VSS exams.