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1984



An exciting new way to learn about computers

Television series made possible on NEW JERSEY NETWORK
by grants from the NJ Institute of Technology
and the NJ Department of Education.

A C A D E M Y
ON
COMPUTERS

New Jersey State Library

Beginning Saturday
April 21, 1984 at 5:30 p.m.

What is the Academy on Computers

The Academy on Computers is an adult learning system consisting of:

- A 12-part television series.
- Study materials and computer software related to the television series.
- An innovative computer-managed system providing individualized feedback.

The Academy on Computers offers an easy, convenient, and personalized way to learn about the world of computer technology. It is a 12-part television-based course you can take in your own home or office at your own pace. The Academy is designed to help you:

- Become familiar with the workings of a microcomputer.
- Understand basic computer terminology such as cassette, disk, chips, bits, and bytes.
- Discover available resources, people, software, books, and organizations.
- Learn about various kinds of computer programs.
- Evaluate and select software.
- Develop one or more simple computer programs.

The Academy is being brought to you by your local public television station. The Academy was originally offered and successfully continues in Ontario where 13,000 people participated in this introductory course exploring the operations and functions of computers.

"Thank you for providing such an instructive (yet simple) course. As a marketing manager, I will soon have my own terminal in my office. Your training has enhanced my preparation for this."

George Rose Businessman

"Your program is excellent and has removed my feeling of frustration because my children were able to use the computer and I was only able to pay for it!"

Mary Scott Parent

"The series was excellent. The animated segments of "Bits and Bytes" were superb. They should be released as an excellent teaching aid to media centers across the province."

Vernon Fraser Teacher

Here is How the Academy on Computers Works

The first step is to send the registration form, located in the back of this brochure, and your payment right away to New Jersey Network.

Enrollments are limited—so reserve your space now. You will receive your packet of study materials and computer software in April 1984.

"Bits and Bytes," a series of 12 half-hour television programs will be broadcast over New Jersey Network Channels 23, 50, 52, and 58 beginning the week of April 15 on Saturdays at 5:30 p.m. and repeated Sundays at 12 noon. Actors Luba Goy and Billy Van do the teaching and demonstrating in the television series "Bits and Bytes" while you follow along at home or at school or in your office. They will help provide you with information about the basics of personal microcomputers.

Now you are ready to embark on an exciting and valuable experience learning about microcomputers.

“Bits and Bytes,”

Week by Week

Program 1—Getting Started

- Introduces you to the personal micro-computers used throughout the series
- Shows you how to activate and load disks and cassettes
- Illustrates what disks look like and how they work
- Gives you an inside look at the mechanics of computers—circuits, chips, and switches
- Teaches you that computers are not calculating machines but *logic* machines

Program 2—Ready-Made Programs

- Examines ready-made computer programs
- Shows you everyday applications of computers for record-keeping, accounting, and filing
- Introduces the computer as a teaching aid
- Explains the differences between Read Only Memory (ROM) and Random Access Memory (RAM)
- Takes you on a visit to the Minnesota Educational Computing Consortium

Program 3—How Programs Work

- Introduces you to the essentials of program writing
- Explains what happens in the computer between “Input” and “Output”
- Illustrates the interaction between the Central Processing Unit (CPU) and ROM and RAM

Program 4—Storing Information

- Examines the computer as a tool for the storage and retrieval of information
- Explains how to move information from your computer’s memory to a disk or cassette for long-term storage

Program 5—Communication Between Computers

- Explains modems and other computer

communication devices

- Gives you a first-hand look at computer networks and explains how you can join your computer to other micro, mini, and main-frame computers for wide-scale information sharing

Program 6—Computer Languages

- Introduces BASIC, APL, and COBOL, and explains their capabilities and uses
- Explains how “high level” computer languages developed from cumbersome “machine languages”
- Shows how a new simplified language called LOGO is giving children easy access to computers
- Teaches you how “compiler” and “interpreter” programs work

Program 7—Computer-Assisted Instruction

- Demonstrates drill, practice, and tutorial programs
- Outlines elements of good computer-assisted instruction
- Shows you PILOT, an authoring language
- Traces the history of Computer-Assisted Instruction (CAI)

Program 8—Simulations and Games

- Explores computer simulations and games and the features that make them valuable educational tools
- Discusses the concepts of digital and analog communications
- Explains “booting DOS”
- Introduces you to a top Atari games designer

Program 9—Computer Graphics

- Introduces several graphics commands in BASIC and explores various graphics packages and tablets
- Details the differences between high and low-resolution graphics
- Takes you to see impressive business graphics at Hewlett-Packard in California

Program 10—Computer Music

- Explains how computers create sound

- Explores the musical potential of personal microcomputers and the educational uses of voice and music synthesis
- Shows you how a high school and two colleges use computers to teach music

Program 11—Computers at Work

- Examines the pros and cons of word processing and the electronic spread sheet (VisiCalc)
- Explains how printers and plotters work
- Takes you to visit an Ontario school and a computer company in California

Program 12—What Next?

- Reviews the main topics of the series
- Gives you the opinions of experts featured in the series on the future potential of computers in our homes, schools, and workplaces
- Demonstrates the “musical finger painting” of a Toronto composer

Your Courseware

1. The 3-Part Resource Book

- *“Bits and Bytes Study Guide”* which elaborates upon the main points presented in the television programs and provides questions for discussion, bibliography, and a glossary of terms.
- *“Home User’s Guide to Microcomputers”* which gives participants practical advice on purchasing and maintaining a microcomputer, including how to select a microcomputer; the use of modems and how to tap into large data bases; and a buying guide outlining specific features of several popular machines. The guide also includes essays on software for the home, small business applications, and word processing.
- *“Educational Applications Handbook”*

which provides ideas for both elementary and secondary teachers on *what* to do with the computer in the classroom, and *how* to do it. The handbook presents ideas on teaching computer literacy, offers various possibilities for the physical setup of the machines and their use in those settings, and curriculum applications with suggested study units.

2. The Correspondence Envelope

- Contains two sets of questionnaires that provide you with additional support in keeping track of your own progress during the Academy. These questionnaires are to be completed at set times during the Academy, and returned to us for our computer-managed system to respond. Instructions are printed on the front of the envelope for your convenience.

3. The Academy on Computers Newsletter

- Published three times during the Academy, it will help you share experiences, observations, and information with other participants, and will supply you with helpful information and in-depth articles.

4. Hands-on Beginner's Manual and Sample Software Packages

- Offers participants the choice of ONE manual and software package (that includes a self-test) that will help you to:
 - Operate a microcomputer
 - Load and run programs from disk or cassette
 - Save, copy, and edit some features of software
 - Use the computer as a calculator

This component of the Academy gives you the opportunity to deal with actual computing materials—valuable if you already own a computer, or would simply like to understand more about step-by-step computing.

The materials are specifically designed for the following models:

- Apple II Plus
- Atari (400 or 800)
- Commodore PET 4016 or 4032 (not applicable to the CBM 8032)
- Commodore 64K
- IBM Personal Computer
- Texas Instruments TI-99/4A
- TRS-80 Model III (not applicable to Model I, II, or the extended basic color computer)

*** PLUS...**

A special *hot-line telephone* service will be available to you to answer your questions about software problems, and about the course in general.

Participants who submit the completed courseware questionnaires will receive a *certificate* of completion.

NOTE: You will not receive your courseware until your registration form is completed and returned to us with your payment. Please send in your form as soon as possible. Remember, enrollment is limited for the Academy on Computers.

Who Should Enroll and Why

The Academy is an alternative method of learning for:

- Busy ADULTS who want to learn how a computer works without leaving their homes to take a classroom course.
- TEACHERS who want to know how to use microcomputers in educational settings.
- BUSINESS PEOPLE who need a quick and concise introduction to the fundamentals of the microcomputer.

Enrollees will direct their own learning, deciding how involved to become and setting their own pace. The Academy will help you set your learning objectives and the interactive support systems will help you meet them.

In Answer to Your Questions

1. Do I need a computer to take this course?

No, you do not need one to participate in the Academy on Computers. Hands-on experience is desirable, but entirely optional.

2. If the computer I own or have access to is not one of those you list in the hands-on manual section, will the Academy be of use to me?

Yes. While the hands-on component is an important part of the learning package, the primary aim of this course is to help you become computer-literate. By the end of the course you will know about the basic workings of microcomputers, whatever the make and model. We hope that our television programs and courseware will open your eyes to the many applications of this modern tool in your daily lives.

3. How much personal assistance does the Academy on Computers provide?

Plenty. The Academy package goes beyond the course mentioned. There are responses to questionnaires, newsletters, lists of computer clubs and resource people, and a special telephone hot-line to respond to related questions. A built-in support system makes learning at home more comfortable.

Enroll Today

For a fee of \$70.00 you can participate in the Academy on Computers. As a participant, you will receive all of the Academy on Computers study materials, correspondence, and computer software described in this brochure.

As an added value, your \$70.00 fee enrolls you as a member of the New Jersey Network. As a member, you will receive a one year subscription to *New Jersey Network Magazine* and other valuable benefits throughout the year.

Current New Jersey Network members can enroll for only \$55.00, a 21% savings.

For an additional minimum fee, continuing education units (CEU's) are available through the New Jersey Institute of Technology. Information will be sent, if you are interested.

Simply complete the attached registration form. Remember to indicate which hands-on manual and software package you would like to receive. You may select materials for only ONE of the computer makes and models described on page 8.

The complete Academy package will arrive in April 1984.

Enrollment in the Academy is limited. The final date for registration is March 23.

If you are not totally satisfied with the Academy on Computers, we will refund your registration fee provided you return the complete courseware package, in good condition, before April 30, 1984.

WNET

TV Ontario

Presented by WNET/THIRTEEN. National distribution to public television stations by the Interregional Program Service (IPS)

Academy on Computers was conceived, developed, and produced by TVOntario, Canada's leading educational television service.

I hereby authorize New Jersey Network
to use my credit card for payment to the
ACADEMY ON COMPUTERS.

MASTERCARD # _____

VISA # _____

Authorizing Signature

Expiration Date _____

Current NEW JERSEY NETWORK Member Yes No

Send me information on CEU's available
through the New Jersey Institute of Technology Yes No

Note: Register now, enrollment is limited.

Make check or money order payable to:

New Jersey Broadcasting Authority

Send this registration form and your payment
to:

New Jersey Network
Academy on Computers
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For office use only

