



Preparing for Career Success  
in Arts, Audio-Video  
Technology and  
Communications



## Career Clusters Prepare All Students for College and Careers

Career Clusters prepare students for the information age as schools strive for higher achievement in science, math and communication. One key to improving student achievement is providing students with relevant contexts for learning. Career Clusters offer a context for learning by linking what students learn in school with the knowledge and skills they need for success.

### The Concept of Career Clusters

Career Clusters identify the knowledge and skills students need as they follow a pathway towards their career goals. The knowledge and skills identified form a strong foundation needed by students for success—whether in high school, a postsecondary institution or at the workplace.

### How to Pursue Education and Training in Arts, Audio-Video Technology and Communications

This cluster offers two different avenues of concentration.

Careers in the Performing Arts, Visual Arts or certain aspects of Journalism, Broadcasting and Film require courses and activities that

challenge students' creative talents.

Careers in Audio-Video Communications Technology, Telecommunications or Printing Technology require strong backgrounds in computer and electronic-based technology and a solid foundation in math and science.

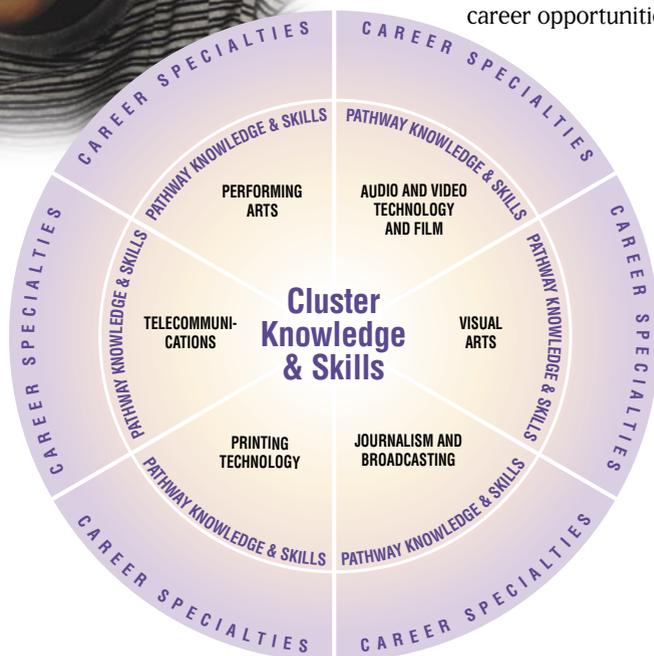
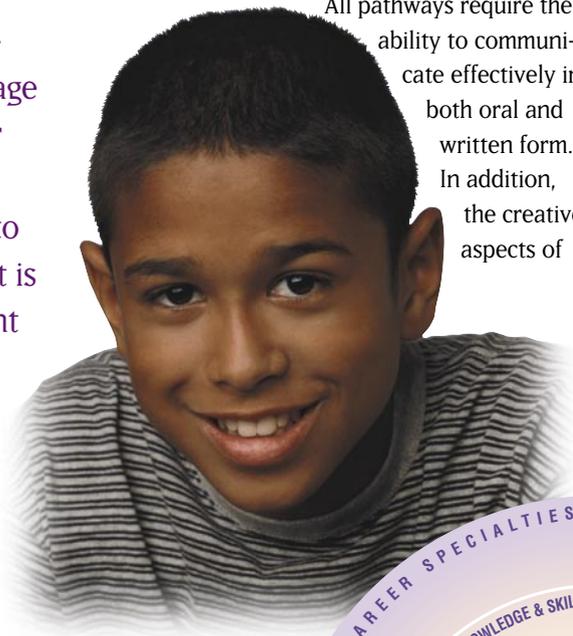
All pathways require the ability to communicate effectively in both oral and written form. In addition, the creative aspects of

this cluster are rapidly merging with the technological, making it even more challenging.

Preparation for careers in this cluster must begin in the elementary grades and continue through high school, allowing students to gain experience in the performing and visual arts as well as in the academic foundations.

### Career Pathways at a Glance

Arts, Audio-Video Technology and Communications careers are divided into six pathways: Audio and Video Technology and Film; Journalism and Broadcasting; Performing Arts; Printing Technology; Telecommunications; and Visual Arts. Each of these pathways offers exciting and challenging career opportunities.



## Audio and Video Technology and Film

### Overview

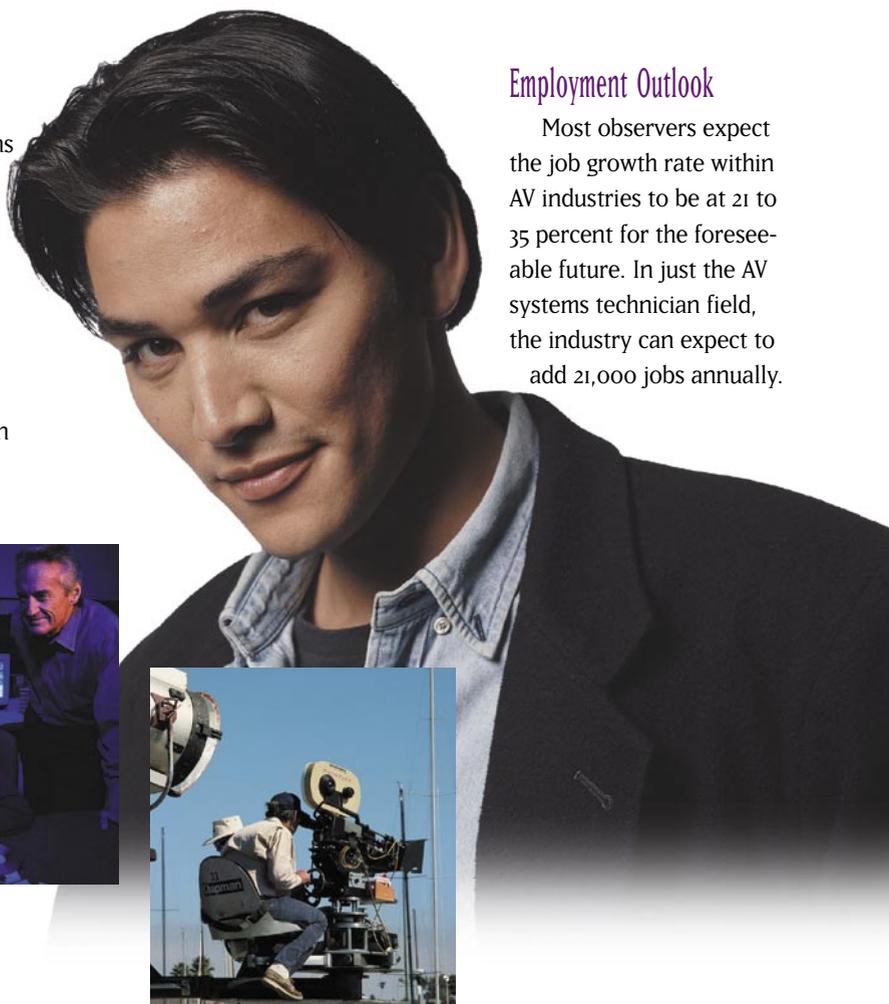
Broadly, individuals that work in the AV communications industry manufacture, sell, rent, design, install, integrate, operate and repair the equipment of audiovisual communications. They are involved in the presentation of sound, video and data to groups in such venues as corporate boardrooms, hotels, convention centers, classrooms, theme parks, stadiums and museums. The major activity sectors in the AV communications industry are distributive service firms (AV dealers, rental companies, consultants, designers, and related firms), manufacturers of AV presentations and communications products and large end-users.

### Sample Occupations

- Audio-visual systems technician
- Audio technician
- Sound board operator
- Video technician
- Lighting technician
- Installer/installation engineer/rigger
- Service technician



- Service repair technician
- Field technician
- Electrical engineer
- Mechanical engineer
- Project manager
- Dealer manager/owner



### Employment Outlook

Most observers expect the job growth rate within AV industries to be at 21 to 35 percent for the foreseeable future. In just the AV systems technician field, the industry can expect to add 21,000 jobs annually.

### Credentials

Certificates may include ICIA (International Communications Industries Association Inc.) certification in the following areas:

- CTS-Certified Technology Specialist
- CAVSP-Certified Audio-Video Sales Professional
- CTS-Installation
- CTS-Rental
- CTS-Design

CAVSP advanced degrees may include an associate degree in electronics or electrical engineering or bachelor's degree in mechanical or electrical engineering.

## Journalism and Broadcasting

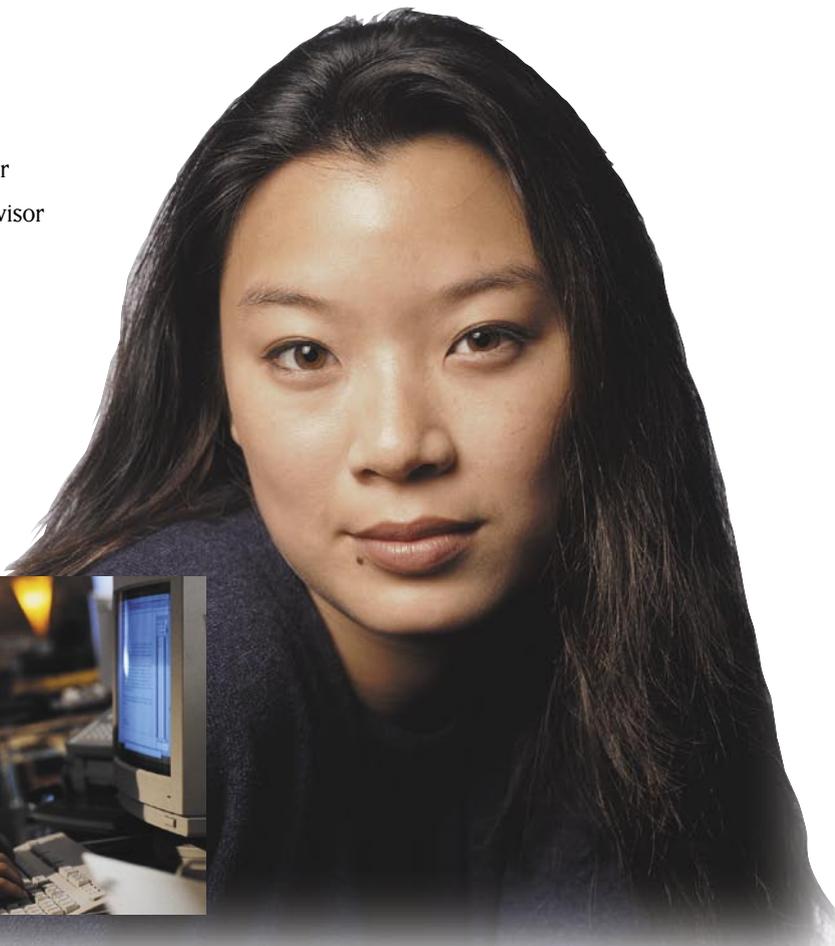
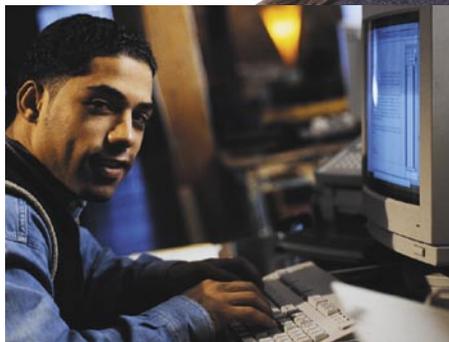
### Overview

News analysts, reporters and correspondents gather information, prepare stories and make broadcasts that inform us about local, state, national and international events; present points of view on current issues; and report on the actions of public officials, corporate executives, special interest groups and others who exercise power.

Broadcast and sound technicians install, test, repair, set up and operate the electronic equipment used to record and transmit radio and television programs, cable programs and motion pictures. Chief engineers, broadcast field supervisors and transmission engineers supervise the technicians who operate and maintain broadcasting equipment.

### Sample Occupations

- Chief engineer
- Transmission engineer
- Broadcast field supervisor
- Broadcast and sound technician
- Camera operator
- News analyst
- Reporter
- Correspondent



### Credentials

- Certification by the Society of Broadcast Engineers
- Engineering degrees
- Bachelor of Arts degree in Journalism, Broadcast News and/or Speech

### Employment Outlook

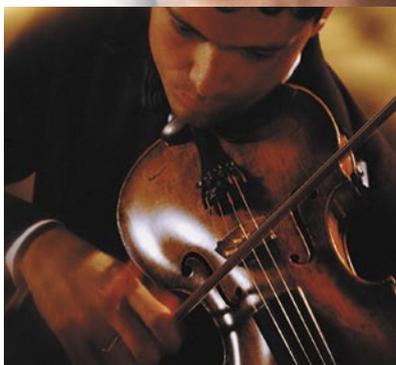
Announcers hold about 69,000 jobs at present. News analysts, reporters and correspondents currently hold approximately 64,000 jobs, while broadcast and sound technician jobs number about 47,000.

# Performing Arts

## Overview

A variety of businesses and groups involved in theatrical and musical performances are included in this pathway. Theatrical production companies, for example, coordinate all aspects of producing a play or theater event. Agents represent actors and assist them in finding jobs. Costume design management companies design costumes. Lighting and stage crews handle the technical aspects of productions.

Also in this segment are dance studios, schools and halls, which provide places for professional and amateur dancers to practice, perform and learn. Performers of live musical entertainment include musical artists, dance bands, orchestras, jazz musicians and various modern bands. Orchestras range from major professional orchestras with million-dollar budgets to community orchestras often with part-time schedules.



## Sample Occupation

- Actor/actress
- Lighting designer
- Set designer
- Stage crew
- Instrumentalist
- Musician
- Singer
- Conductor
- Dance instructor
- Voice instructor
- Playwright
- Scriptwriter
- Others in Performing Arts related businesses



## Credentials

All levels of postsecondary degrees and certificates are available from Associate to Ph.D. in many areas such as:

- Stage Management
- Music
- Dance
- Theater Arts

- Speech
- Education
- Arts Administration

## Employment Outlook

Actors, directors and producers hold about 69,000 jobs in motion pictures, stage plays, television and radio. Professional dancers and choreographers hold an average of about 38,000 jobs at any one time. Musicians, singers and related workers currently hold about 249,000 jobs.



## Printing Technology

### Overview

The printing process has three stages—prepress, press and binding or postpress. Prepress workers prepare material for printing presses. They perform a variety of tasks involved with transforming text and



pictures into finished pages and making printing plates of the pages. Desktop publishing poses new challenges for the printing industry. The



press operators monitor the printing process on a control panel or computer monitor, which allows them to adjust the press electronically.

printing industry is rapidly moving toward complete “digital imaging,” by which customers’ material received digitally is converted directly into printing plates. Other innovations in prepress work are digital color page makeup

systems, electronic page layout systems and off-press color proofing systems. Printing press operators prepare, operate and maintain the printing presses in a pressroom. In most shops, press operators also perform preventive main-

tenance. Computers allow press operators to perform many of their tasks electronically. With this equipment,

### Sample Occupations

- Desktop publishing specialists
- Job printers
- Platemakers
- Press operators

### Credentials

- Associate degree in Printing Technology
- Apprenticeship certificate

### Employment Outlook

Prepress workers currently hold about 141,000 jobs, and press operators hold about 191,000 jobs.

# Telecommunications

## Overview

Telecommunications specialists focus on the interaction between computer and communications equipment. Telecommunications equipment is computerized and can communicate a variety of information, including data, graphics and video. The workers who set up and maintain

## Sample Occupations

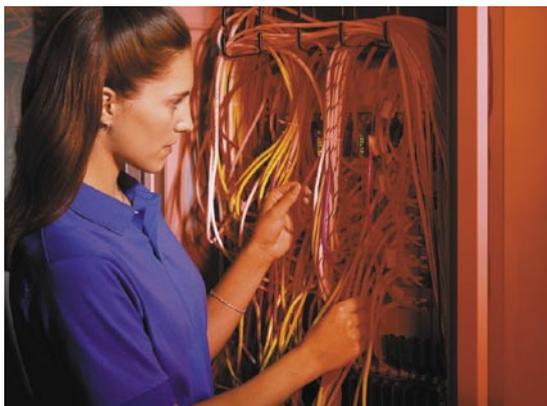
- Central office installers
- Network technicians
- Telecommunications specialists

## Credentials

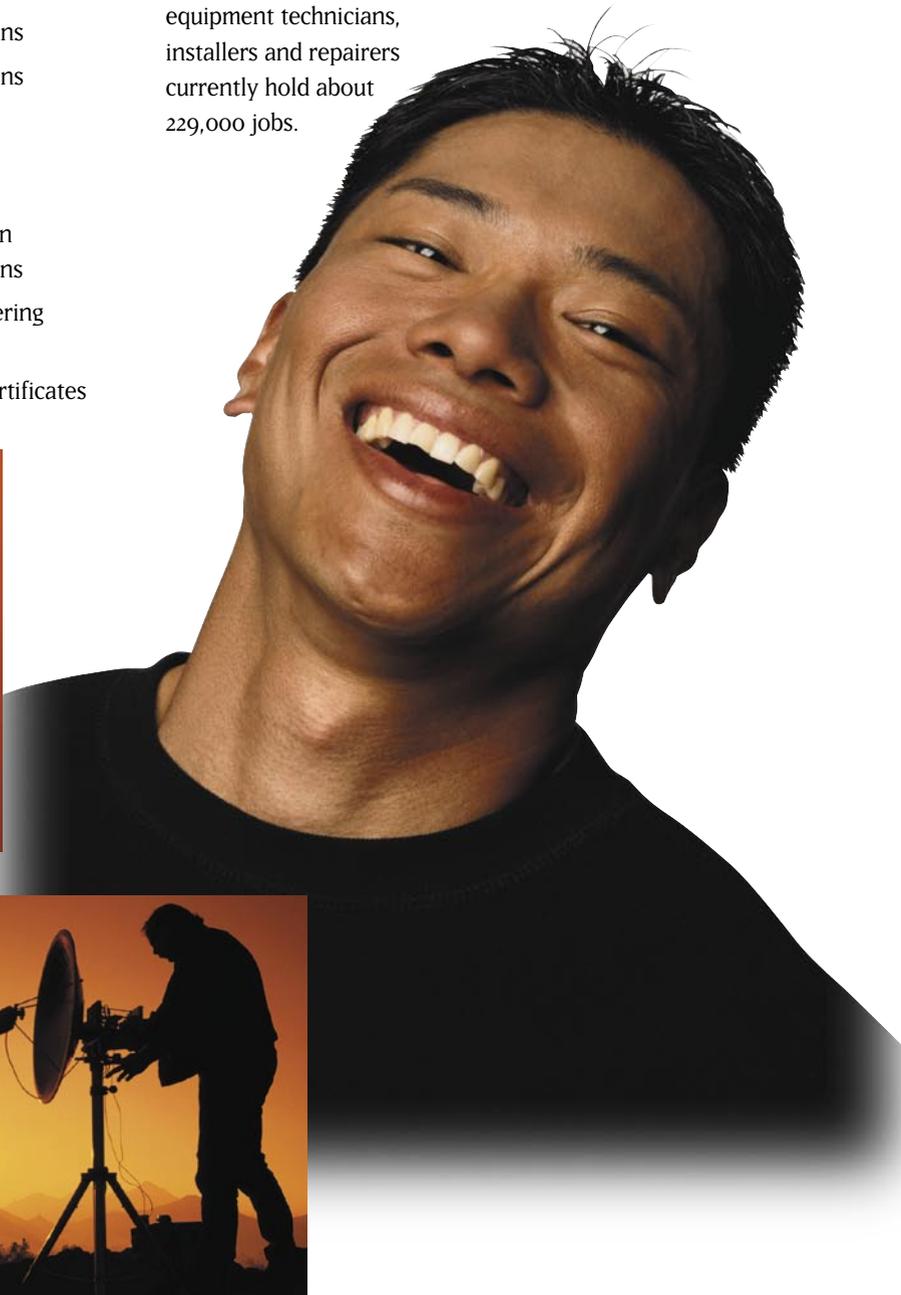
- Associate degree in Telecommunications
- Electronic Engineering degrees
- Apprenticeship certificates

## Employment Outlook

Telecommunications equipment technicians, installers and repairers currently hold about 229,000 jobs.



this sophisticated equipment are telecommunications equipment technicians, installers and repairers.



## Visual Arts

### Overview

Visual artists create art to communicate ideas, thoughts or feelings. They use a variety of methods—painting, sculpting or illustrating—and an assortment of materials, including oils, watercolors, acrylics, pastels, pencils, pen and ink, photography, plaster, clay and computers. Their works may be realistic, stylized or abstract and may depict objects, people, nature or events.

Visual artists are generally categorized in two groups. Fine artists create art to satisfy their own need for self-expression. Illustrators and graphic designers, on the other hand, put their artistic skills at the service of commercial clients, such as major

corporations; retail stores; and advertising, design and publishing firms.



### Sample Occupations

- Painter
- Sculptor
- Print maker
- Illustrator
- Fashion artist
- Cartoonist
- Animator
- Graphic designer
- Commercial photographer
- Art director



- Art teacher
- College professor
- Computer artist
- Gallery owner
- Curator
- Textile designer
- Interior designer
- Set designer
- Visual information specialist

### Credentials

- Associate degree in Graphic Design
- Bachelor's or Master's degree in Photography, Advertising, Art Therapy, Architecture and Drafting, Museum Management, Jewelry, Commercial Art, Technical Illustration, Floral Design, Web Design and Graphic Design
- Bachelor's degree in Art Education or Master's degree in Education
- Teaching certification with concentration in Art
- Ph.D. in Art History

### Employment Outlook

Visual artists currently hold about 208,000 jobs. Nearly 7 out of 10 are self-employed. Self-employed, visual artists are either graphic designers who freelance, offering their services to advertising agencies, publishing houses and other businesses, or fine artists who earn income when they sell a painting or other work of art.



## The 16 Career Clusters

Agriculture, Food & Natural Resources  
Architecture & Construction  
Arts, A/V Technology & Communications  
Business, Management & Administration  
Education & Training  
Finance  
Government & Public Administration  
Health Science  
Hospitality & Tourism  
Human Services  
Information Technology  
Law, Public Safety, Corrections & Security  
Manufacturing  
Marketing, Sales & Service  
Science, Technology, Engineering & Mathematics  
Transportation, Distribution & Logistics



[careerclusters@careerclusters.org](mailto:careerclusters@careerclusters.org)  
[www.careerclusters.org](http://www.careerclusters.org)

**STATE**  **DIRECTORS**

National Association of State Directors  
of Career Technical Education Consortium

**NCTEF**



©2006

National Career Technical Education  
FOUNDATION

©2006

January 2006