

# Video and Media Technology

8497 36 weeks

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## Course Description

**Suggested Grade Level:** 10 or 11 or 12

**Prerequisites:** 8415 or 8418 or 8459

This course offers students a hands-on opportunity to study all aspects of video and media production. Students will conceptualize, plan, and contribute through all production phases: preproduction, production, and postproduction. In addition, students will practice various methods of gathering and recording information and creating novel content to create a variety of video and media productions while operating studio editing software and video and audio equipment.

# Task Essentials Table

- Tasks/competencies designated by plus icons (⊕) in the left-hand column(s) are essential
- Tasks/competencies designated by empty-circle icons (○) are optional
- Tasks/competencies designated by minus icons (⊖) are omitted
- Tasks marked with an asterisk (\*) are sensitive.

Task Number	8497	Tasks/Competencies
Determining the Role of Media in Society		
39	⊕	Research the development of broadcasting from early radio to present-day television and broadband.
40	⊕	Describe the function, role, and influence of video media on society.
41	⊕	Analyze the expanding media landscape, the top media delivery providers, and the effects on media production and consumer habits.
42	⊕	Evaluate the laws and ethical concerns affecting video media.
Exploring Types of Video Formats		
43	⊕	Identify various video formats and their characteristics.
44	⊕	Compare the physical compositions of various recording media.
45	⊕	Compare international broadcast standards.
Preproduction: Writing for Video Media		
46	⊕	Analyze the format, components, and composition techniques in a video storyboard and script.
47	⊕	Compose a video script.
48	⊕	Write a public service announcement (PSA) storyboard and script.
49	⊕	Write a news story or long news feature script.
50	⊕	Write a commercial storyboard and script.
51	⊕	Write a(n) instructional, biographical, documentary, or historical storyboard and script.

Preproduction: Planning the Production		
52	+	Identify the objectives of a production.
53	+	Create a production proposal (i.e., treatment).
54	+	Prepare a production budget.
55	+	Develop a production schedule.
56	+	Define roles of production personnel and their tasks.
Production: Exploring the Elements		
57	+	Demonstrate production safety techniques.
58	+	Identify video production commands and terminology.
59	+	Demonstrate video production commands and terminology.
60	+	Demonstrate camera techniques.
Production: Using Video Production Equipment		
61	+	Identify the types and essential parts of video cameras.
62	+	Demonstrate situational awareness.
63	+	Identify microphones and their applications.
64	+	Identify the operating procedures for essential production equipment.
65	+	Create full-screen graphics and boxes, using a graphics generator or computer-based graphics program.
66	+	Apply various lighting instruments and lighting techniques.
67	+	Produce a video.
Postproduction: Editing Video		
68	+	Define time code.
69	+	Edit video, using software-based editing equipment.
70	+	Demonstrate file-management techniques.
71	+	Apply basic audio levels, overmodulation, and mixing techniques.

72	⊕	Edit a simple multi-track, mixed-media sequence.	
73	⊕	Apply basic video effects and transitions.	
Postproduction: Mastering the Video			
74	⊕	Demonstrate file compression techniques for various distribution methods.	
75	⊕	Critique video productions.	
76	⊕	Analyze final audio enhancements.	
77	⊕	Assemble a final video reel or portfolio.	

Legend: ⊕ Essential ○ Non-essential ⊖ Omitted

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# Curriculum Framework

## Determining the Role of Media in Society

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### Task Number 39

**Research the development of broadcasting from early radio to present-day television and broadband.**

#### Definition

Research should include the development of broadcasting, including

- radio
- first moving pictures (i.e., flip book)
- first global broadcast images
- emerging broadcast formats
- the basic concepts of linear and non-linear editing.

#### Process/Skill Questions

- What are some milestones in the development of broadcast radio and television?

- What was the purpose of early broadcasts?
- What influenced the development of broadcasts?

## **Common Career Technical Core**

### **AR-AV1**

Describe the history, terminology, occupations and value of audio, video and film technology.

## **ITEEA National Standards**

### **13. Assess the Impact of Products and Systems**

### **17. Information and Communication Technologies**

### **7. The Influence of Technology on History**

## **TSA Competitive Events**

### **Digital Video Production**

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## **Task Number 40**

### **Describe the function, role, and influence of video media on society.**

#### **Definition**

Description should include showing

- how society has been influenced by video media politically, economically, and socially
- how video media entertains, informs, educates, and persuades viewers.

#### **Process/Skill Questions**

- How has video media made certain issues *socially acceptable*?
- How has video media influenced political beliefs?
- How has the increased amount of available information allowed economics to diversify?
- What is the correlation between viewers and the media viewed?
- How can videos influence a variety of cultures?
- What are the social implications of a viral video?

## **Common Career Technical Core**

### **AR-AV1**

Describe the history, terminology, occupations and value of audio, video and film technology.

## **ITEEA National Standards**

### **17. Information and Communication Technologies**

#### **4. The Cultural, Social, Economic, and Political Effects of Technology**

#### **6. The Role of Society in the Development and Use of Technology**

#### **7. The Influence of Technology on History**

## **TSA Competitive Events**

### **Digital Video Production**

#### **Prepared Presentation**

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## **Task Number 41**

**Analyze the expanding media landscape, the top media delivery providers, and the effects on media production and consumer habits.**

### **Definition**

Analysis should include

- current popular delivery methods of video media
- emerging delivery methods of video media
- identification of the producer and the consumer
- consumer habits
- financial beneficiaries (e.g., Apple TV, Roku, Hulu, Netflix, Xbox Media Center, individuals through YouTube and others)
- mobile technologies.

### **Process/Skill Questions**

- Who might financially benefit from videos?
- How do consumer habits affect emerging video technologies?
- How do emerging video technologies affect consumer habits?

## **Common Career Technical Core**

### **AR-AV1**

Describe the history, terminology, occupations and value of audio, video and film technology.

## **ITEEA National Standards**

### **17. Information and Communication Technologies**

#### **4. The Cultural, Social, Economic, and Political Effects of Technology**

#### **6. The Role of Society in the Development and Use of Technology**

## **TSA Competitive Events**

### **Digital Video Production**

#### **Prepared Presentation**

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## **Task Number 42**

### **Evaluate the laws and ethical concerns affecting video media.**

#### **Definition**

Evaluation should include an examination of laws and codes of ethics that govern video media. Laws and ethics can be related to such items as

- filming rights
- copyright law, copyright infringement, and digital rights management
- persons appearing in a video and how they are portrayed
- fair use guidelines.

#### **Process/Skill Questions**

- Which media organizations have codes of ethics?



- Who regulates and governs compliance of video media and their laws?
- How do copyright laws affect content?

## **Common Career Technical Core**

### **AR-AV1**

Describe the history, terminology, occupations and value of audio, video and film technology.

## **ITEEA National Standards**

### **13. Assess the Impact of Products and Systems**

### **17. Information and Communication Technologies**

### **7. The Influence of Technology on History**

## **TSA Competitive Events**

### **Digital Video Production**

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# **Exploring Types of Video Formats**

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## **Task Number 43**

### **Identify various video formats and their characteristics.**

#### **Definition**

Identification should include characteristics of various video formats or containers, such as

- .avi (Audio Video Interleave)
- .mp4 (Moving Picture Experts Group)
- .flv (Flash Video)
- .mov (Apple's QuickTime)
- .ogg, from Xiph.org
- .mkv (Mastroska)
- .vob (Video Object)

- .ase (Advanced Systems Format)

### **Process/Skill Questions**

- What influences the choice of video format?
- What are the advantages and disadvantages of different video formats?
- What equipment is needed for filming and editing different video formats?

### **ITEEA National Standards**

#### **17. Information and Communication Technologies**

##### **4. The Cultural, Social, Economic, and Political Effects of Technology**

##### **6. The Role of Society in the Development and Use of Technology**

### **TSA Competitive Events**

#### **Digital Video Production**

#### **Scientific and Technical Visualization (SciVis)**

#### **Webmaster**

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## **Task Number 44**

### **Compare the physical compositions of various recording media.**

#### **Definition**

Comparison should include

- videotape (magnetic oxide)
- DV tape
- solid-state media
- SD card formats
- file transfer protocols.

### **Process/Skill Questions**

- What are the different types of memory cards available for purchase?
- How does a digital video (DV) tape differ from a memory card?
- How can you protect your media?

## **Common Career Technical Core**

### **AR-AV2**

Demonstrate the use of basic tools and equipment used in audio, video and film production.

## **ITEEA National Standards**

### **17. Information and Communication Technologies**

#### **3. The Relationships Among Technologies and the Connections Between Technology and Other Fields**

## **TSA Competitive Events**

### **Digital Video Production**

## **Task Number 45**

### **Compare international broadcast standards.**

#### **Definition**

Comparison should include the broadcast standards of the following:

- National Television System Committee (NTSC) video display format
- Phase Alternating Line(PAL) video display format
- High-definition television (HDTV)
- Digital television (DTV)
- Standard television (SDTV)

#### **Process/Skill Questions**

- How do these standards affect camera and editing equipment?
- What does *dropped frames* mean in terms of editing?
- How does resolution affect the quality of picture?
- How is the interlacing process used to record images?

## **ITEEA National Standards**

### **17. Information and Communication Technologies**

#### **4. The Cultural, Social, Economic, and Political Effects of Technology**

#### **6. The Role of Society in the Development and Use of Technology**

## **TSA Competitive Events**

### **Digital Video Production**

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# **Preproduction: Writing for Video Media**

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## **Task Number 46**

### **Analyze the format, components, and composition techniques in a video storyboard and script.**

#### **Definition**

Analysis should include

- evaluating the use of language, ensuring that
  - the subject-predicate-object sentence structure is used
  - sentences are clear and concise
  - present tense and active voice are maintained
- identifying the format, genre, and main script elements or components
- identifying script and storyboard techniques, including the use of a shot list and materials list.

#### **Process/Skill Questions**

- What is the difference between conversational and composition writing?
- What is conversational style and why is it a good choice when writing for video media?
- When should the present tense be avoided?

- How does the structure of video media writing affect the viewer?

## **Common Career Technical Core**

### **AR-AV2**

Demonstrate the use of basic tools and equipment used in audio, video and film production.

## **ITEEA National Standards**

### **13. Assess the Impact of Products and Systems**

### **17. Information and Communication Technologies**

#### **3. The Relationships Among Technologies and the Connections Between Technology and Other Fields**

#### **4. The Cultural, Social, Economic, and Political Effects of Technology**

## **TSA Competitive Events**

### **Digital Video Production**

### **Scientific and Technical Visualization (SciVis)**

### **Webmaster**

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## **Task Number 47**

### **Compose a video script.**

#### **Definition**

Composition should include

- using writing techniques influenced by a code of ethics
- using responsible writing techniques, including accuracy, attribution, fairness, and balance
- submitting a detailed storyboard, including a shot list and materials list.

#### **Process/Skill Questions**

- Where in the sentence should attribution be placed when writing for video media?

- Why do video media writers need to be aware of responsible writing techniques?
- How does responsible writing affect the credibility of a writer or a media company?

## **Common Career Technical Core**

### **AR-AV4**

Design an audio, video and/or film production.

### **AR-JB2**

Demonstrate writing processes used in journalism and broadcasting.

## **ITEEA National Standards**

### **13. Assess the Impact of Products and Systems**

### **17. Information and Communication Technologies**

#### **3. The Relationships Among Technologies and the Connections Between Technology and Other Fields**

#### **4. The Cultural, Social, Economic, and Political Effects of Technology**

## **TSA Competitive Events**

### **Digital Video Production**

### **Scientific and Technical Visualization (SciVis)**

### **Webmaster**

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## **Task Number 48**

### **Write a public service announcement (PSA) storyboard and script.**

#### **Definition**

Writing should follow the format of the PSA, including

- adhering to industry-accepted guidelines for effectiveness
- creating an awareness for a social issue
- limiting video duration to approximately 30 seconds

- submitting a detailed storyboard, including a shot list and materials list.

### **Process/Skill Questions**

- Why do media companies provide PSAs?
- What is the most effective method of conveying the PSA message?
- How do media companies select their PSA topics?
- How can tone of voice, body language, music and editing affect the quality of the PSA?

### **Common Career Technical Core**

#### **AR-AV4**

Design an audio, video and/or film production.

#### **AR-JB2**

Demonstrate writing processes used in journalism and broadcasting.

### **ITEEA National Standards**

#### **13. Assess the Impact of Products and Systems**

#### **17. Information and Communication Technologies**

#### **3. The Relationships Among Technologies and the Connections Between Technology and Other Fields**

#### **4. The Cultural, Social, Economic, and Political Effects of Technology**

### **TSA Competitive Events**

#### **Digital Video Production**

#### **Scientific and Technical Visualization (SciVis)**

#### **Webmaster**

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## **Task Number 49**

### **Write a news story or long news feature script.**

#### **Definition**

Writing should follow the format for the news story or long news feature script, including

- adhering to industry-accepted guidelines for effectiveness
- maintaining the appropriate format
- highlighting current events that are pertinent to the audience
- adding a shot list and materials list.

### **Process/Skill Questions**

- How does the media outlet determine that an event is newsworthy?
- How does a news director determine the amount of time devoted to a specific news story?
- How are scripts for news stories typically formatted?
- Who uses the script, and which script elements are used?

### **Common Career Technical Core**

#### **AR-AV4**

Design an audio, video and/or film production.

#### **AR-JB2**

Demonstrate writing processes used in journalism and broadcasting.

### **ITEEA National Standards**

#### **13. Assess the Impact of Products and Systems**

#### **17. Information and Communication Technologies**

#### **3. The Relationships Among Technologies and the Connections Between Technology and Other Fields**

#### **4. The Cultural, Social, Economic, and Political Effects of Technology**

### **TSA Competitive Events**

#### **Digital Video Production**

#### **Scientific and Technical Visualization (SciVis)**

#### **Webmaster**

## **Task Number 50**

**Write a commercial storyboard and script.**



## **Definition**

Writing should follow the commercial storyboard and script format, including

- adhering to industry-accepted guidelines for effectiveness
- persuading or promoting a product or service
- submitting a detailed storyboard, including a shot list and materials list.

## **Process/Skill Questions**

- How is a commercial funded?
- Why are advertisements important to broadcast companies?
- What rights do broadcast companies have to deny or restrict advertiser's airtime?
- How does the writer determine the most effective concept for a commercial?

## **Common Career Technical Core**

### **AR-AV4**

Design an audio, video and/or film production.

### **AR-JB2**

Demonstrate writing processes used in journalism and broadcasting.

## **ITEEA National Standards**

### **13. Assess the Impact of Products and Systems**

### **17. Information and Communication Technologies**

### **3. The Relationships Among Technologies and the Connections Between Technology and Other Fields**

### **4. The Cultural, Social, Economic, and Political Effects of Technology**

## **TSA Competitive Events**

### **Digital Video Production**

### **Scientific and Technical Visualization (SciVis)**

### **Webmaster**

## **Task Number 51**

### **Write a(n) instructional, biographical, documentary, or historical storyboard and script.**

#### **Definition**

Writing should follow the appropriate format, including

- adhering to industry-accepted guidelines for effectiveness
- planning for extensive preproduction work
- adding a shot list and materials list.

#### **Process/Skill Questions**

- What are the additional script components needed for a non-dramatic piece?
- Why is preproduction important for a longer video format?
- What are the purposes of the different types of non-dramatic pieces?

#### **Common Career Technical Core**

##### **AR-AV4**

Design an audio, video and/or film production.

##### **AR-JB2**

Demonstrate writing processes used in journalism and broadcasting.

#### **ITEEA National Standards**

##### **13. Assess the Impact of Products and Systems**

##### **17. Information and Communication Technologies**

##### **3. The Relationships Among Technologies and the Connections Between Technology and Other Fields**

##### **4. The Cultural, Social, Economic, and Political Effects of Technology**

#### **TSA Competitive Events**

##### **Digital Video Production**

##### **Scientific and Technical Visualization (SciVis)**

# Preproduction: Planning the Production

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## Task Number 52

### Identify the objectives of a production.

#### Definition

Identification should include objectives that are

- clear
- specific
- simple
- phrased in terms of their effect on viewers.

#### Process/Skill Questions

- What should the viewers understand after watching the production?
- What is the subject of the production? How is it determined? Why is it helpful to know the subject?
- How does the subject affect video editing and filming?

#### ITEEA National Standards

##### 11. Apply the Design Processes

##### 13. Assess the Impact of Products and Systems

##### 17. Information and Communication Technologies

#### TSA Competitive Events

##### Digital Video Production

##### Scientific and Technical Visualization (SciVis)

## **Task Number 53**

### **Create a production proposal (i.e., treatment).**

#### **Definition**

A production proposal should summarize the production process prior to filming and include

- conceptualization
- analysis of the target audience, media outlet, and likely screen (i.e., output/display) size
- talent and their roles
- the estimated scope of the project
- materials needed for completion.

For funding purposes and programming/release schedules, the production proposal should include

- identification of the target market or audience
- usage
- impact implications.

#### **Process/Skill Questions**

- What is the purpose of a treatment?
- What are the components of a production proposal?
- What makes an effective production proposal?

#### **Common Career Technical Core**

##### **AR-AV3**

Demonstrate technical support skills for audio, video and/or film productions.

##### **AR-JB2**

Demonstrate writing processes used in journalism and broadcasting.

#### **ITEEA National Standards**

**11. Apply the Design Processes**

**13. Assess the Impact of Products and Systems**

**3. The Relationships Among Technologies and the Connections Between Technology and Other Fields**

**TSA Competitive Events**

**Digital Video Production**

**Scientific and Technical Visualization (SciVis)**

**Webmaster**

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## **Task Number 54**

### **Prepare a production budget.**

#### **Definition**

Preparation should include all costs associated with editing, maintenance of equipment, sets, crew and talent, filming, and local and state taxation issues.

#### **Process/Skill Questions**

- What are the factors and who are the individuals that often determine the budget?
- How is the budget controlled?
- Who maintains the budget in larger companies?
- How often is the budget audited?

#### **Common Career Technical Core**

##### **AR-AV3**

Demonstrate technical support skills for audio, video and/or film productions.

#### **ITEEA National Standards**

**11. Apply the Design Processes**

**13. Assess the Impact of Products and Systems**

## **17. Information and Communication Technologies**

### **3. The Relationships Among Technologies and the Connections Between Technology and Other Fields**

#### **TSA Competitive Events**

#### **Digital Video Production**

#### **Scientific and Technical Visualization (SciVis)**

#### **Webmaster**

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## **Task Number 55**

### **Develop a production schedule.**

#### **Definition**

Development of a production schedule should include a timetable listing the order of each production step.

#### **Process/Skill Questions**

- How does production timing affect costs?
- What are the determining factors of a production schedule?
- Who maintains the production schedule?

#### **Common Career Technical Core**

##### **AR-AV3**

Demonstrate technical support skills for audio, video and/or film productions.

#### **ITEEA National Standards**

##### **11. Apply the Design Processes**

##### **13. Assess the Impact of Products and Systems**

##### **17. Information and Communication Technologies**

### **3. The Relationships Among Technologies and the Connections Between Technology and Other Fields**

#### **TSA Competitive Events**

#### **Digital Video Production**

#### **Scientific and Technical Visualization (SciVis)**

#### **Webmaster**

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## **Task Number 56**

### **Define roles of production personnel and their tasks.**

#### **Definition**

Definitions should include identifying the daily tasks of various production personnel, which may include

- producers
- station managers
- technical directors
- camera operators
- talent
- script writers
- teleprompter operators
- directors.

#### **Process/Skill Questions**

- What qualifications does each member of the production team need?
- What equipment does each member require?
- How do these personnel interact to create a production?
- What is a *run down*, and who is responsible for creating it?
- What function do unions (e.g., IATSE) have in television and movies?

#### **Common Career Technical Core**

##### **AR-AV1**

Describe the history, terminology, occupations and value of audio, video and film technology.

## **ITEEA National Standards**

**11. Apply the Design Processes**

**13. Assess the Impact of Products and Systems**

**17. Information and Communication Technologies**

## **TSA Competitive Events**

**Career Preparation**

**Digital Video Production**

**Scientific and Technical Visualization (SciVis)**

**Webmaster**

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# **Production: Exploring the Elements**

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## **Task Number 57**

### **Demonstrate production safety techniques.**

#### **Definition**

Demonstration should include describing general safety standards for equipment manufacturer specifications for tool and machine use and OSHA guidelines for responding to or preventing

- electrical hazards
- fire hazards
- personal injury issues, including first aid, trip, lifting, and rigging hazards.

#### **Process/Skill Questions**

- How should electrical cords be organized?
- How can fires be prevented or minimized on a production set?



- How might guests be advised on the set or studio to keep them safe?

## **Common Career Technical Core**

### **AR-AV3**

Demonstrate technical support skills for audio, video and/or film productions.

## **ITEEA National Standards**

### **12. Use and Maintain Technological Products and Systems**

## **TSA Competitive Events**

### **Digital Video Production**

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## **Task Number 58**

### **Identify video production commands and terminology.**

#### **Definition**

Identification should account for differences among segments and occupations within the industry and include the following terms:

- Rule of thirds
- Leading lines
- Head space
- Commands, including
  - *Rolling*
  - *Action*
  - *Cut*
  - *Zoom*
  - *Pan*
  - *Tilt*
  - *Truck/dolly*
  - *In/out*
  - *Gain*
  - *Quiet on the set*

#### **Process/Skill Questions**

- What is the director describing when he/she says: *Dolly in the camera and cut to the host; Bars and tone*; and *Quiet on the set, stand by crew, stand by talent, roll tape*?
- How does head space apply to photography, videography, and cinematography?
- Why is it important to understand commands when working on a set?

## **Common Career Technical Core**

### **AR-AV1**

Describe the history, terminology, occupations and value of audio, video and film technology.

## **ITEEA National Standards**

### **17. Information and Communication Technologies**

### **TSA Competitive Events**

#### **Digital Video Production**

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## **Task Number 59**

### **Demonstrate video production commands and terminology.**

#### **Definition**

Demonstration should include applying or responding to production commands in a live or mock-live set or studio.

#### **Process/Skill Questions**

- What is the rule of thirds?
- What are leading lines?
- When and why should a videographer use these techniques?

## **Common Career Technical Core**

### **AR-AV3**

Demonstrate technical support skills for audio, video and/or film productions.

## **ITEEA National Standards**

### **17. Information and Communication Technologies**

## **TSA Competitive Events**

### **Digital Video Production**

### **Scientific and Technical Visualization (SciVis)**

### **Webmaster**

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## **Task Number 60**

### **Demonstrate camera techniques.**

#### **Definition**

Demonstration should include

- adjusting and setting white balance
- setting camera for light level
- cropping for the selected format
- adjusting for safe-title zone
- blocking a variety of camera positions
- applying a variety of camera angles
- demonstrating basic camera movements
- framing an interview, using head room, lead room, and room for a super.

#### **Process/Skill Questions**

- What is head room? Lead room? Super?
- How does framing affect the appearance of a video broadcast?
- In which direction should the interviewed subject look? At which angle are they traditionally recorded?

### **Common Career Technical Core**

#### **AR-AV2**

Demonstrate the use of basic tools and equipment used in audio, video and film production.

### **ITEEA National Standards**

#### **11. Apply the Design Processes**

## **17. Information and Communication Technologies**

### **TSA Competitive Events**

#### **Digital Video Production**

#### **Scientific and Technical Visualization (SciVis)**

#### **Webmaster**

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# **Production: Using Video Production Equipment**

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## **Task Number 61**

### **Identify the types and essential parts of video cameras.**

#### **Definition**

Identification should include

- pre-roll
- viewfinder
- battery
- focus
- lens
- comparison of professional and consumer cameras.

#### **Process/Skill Questions**

- What is the purpose of a CCD (charged-coupled device) in video cameras?
- What maintenance does a video camera require?
- What are the emerging video camera trends?

#### **Common Career Technical Core**

## **AR-AV2**

Demonstrate the use of basic tools and equipment used in audio, video and film production.

## **ITEEA National Standards**

### **17. Information and Communication Technologies**

## **TSA Competitive Events**

### **Digital Video Production**

### **Scientific and Technical Visualization (SciVis)**

### **Webmaster**

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## **Task Number 62**

### **Demonstrate situational awareness.**

#### **Definition**

Demonstration should include finding solutions to address variations in the following conditions:

- Lighting
- Shot composition
- Elements out of production control (e.g., weather, nature, people, natural sound)
- Safety (i.e., location management)

#### **Process/Skill Questions**

- What is one of the challenges when shooting a sporting event, such as a football game?
- How can background crowds affect location footage when shooting a news story?
- What are examples of people who collect footage in dangerous situations?

## **Common Career Technical Core**

## **AR-AV3**

Demonstrate technical support skills for audio, video and/or film productions.

## **TSA Competitive Events**

## **Task Number 63**

### **Identify microphones and their applications.**

#### **Definition**

Identification should include a list of various types and applications of microphones used in the industry.

#### **Process/Skill Questions**

- What maintenance does a microphone require?
- What are the different types of microphones?
- What are the emerging trends in microphones?
- What are the recording conditions that would cause you to select one type of microphone over another?

#### **Common Career Technical Core**

##### **AR-AV2**

Demonstrate the use of basic tools and equipment used in audio, video and film production.

#### **ITEEA National Standards**

##### **12. Use and Maintain Technological Products and Systems**

##### **17. Information and Communication Technologies**

##### **3. The Relationships Among Technologies and the Connections Between Technology and Other Fields**

#### **TSA Competitive Events**

##### **Digital Video Production**

##### **Scientific and Technical Visualization (SciVis)**

##### **Webmaster**

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## **Task Number 64**

### **Identify the operating procedures for essential production equipment.**

#### **Definition**

Identification should include the basic operating procedures for the following:

- Audio mixer
- Teleprompter or cue cards
- Video switcher
- Character generator (CG)
- Chromakey
- Tripod
- Steady cam
- Dolly
- Boom
- Jib or crane

#### **Process/Skill Questions**

- Why is it important to balance the lighting of a chromakey?
- How would you check your equipment prior to filming?
- What are the advantages of using a tripod?

#### **Common Career Technical Core**

##### **AR-AV2**

Demonstrate the use of basic tools and equipment used in audio, video and film production.

#### **ITEEA National Standards**

##### **12. Use and Maintain Technological Products and Systems**

#### **TSA Competitive Events**

##### **Digital Video Production**

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## **Task Number 65**

## **Create full-screen graphics and boxes, using a graphics generator or computer-based graphics program.**

### **Definition**

Creation should include full screens and boxes, used to add visual appeal.

### **Process/Skill Questions**

- What equipment is needed to create full-screen graphics and boxes?
- How is a chromakey used?
- When should boxes be used in a video?
- Who determines the content of a full-screen box in a video?

### **Common Career Technical Core**

#### **AR-AV3**

Demonstrate technical support skills for audio, video and/or film productions.

### **ITEEA National Standards**

#### **12. Use and Maintain Technological Products and Systems**

#### **17. Information and Communication Technologies**

### **TSA Competitive Events**

#### **Digital Video Production**

#### **Scientific and Technical Visualization (SciVis)**

#### **Webmaster**

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## **Task Number 66**

### **Apply various lighting instruments and lighting techniques.**

#### **Definition**

Application should include



- demonstrating a basic three-point lighting setup
- identifying lighting techniques and conditions that warrant their use
- choosing the lighting technique that suits the production's overall concept or conditions.

### **Process/Skill Questions**

- What are the different lighting instruments used in production?
- How are the different lighting instruments used?
- What maintenance is required for lighting instruments?

### **Common Career Technical Core**

#### **AR-AV2**

Demonstrate the use of basic tools and equipment used in audio, video and film production.

### **ITEEA National Standards**

#### **12. Use and Maintain Technological Products and Systems**

#### **17. Information and Communication Technologies**

### **TSA Competitive Events**

#### **Digital Video Production**

#### **Scientific and Technical Visualization (SciVis)**

#### **Webmaster**

## **Task Number 67**

### **Produce a video.**

#### **Definition**

Production should include taking a video project through the phases/stages of

- preproduction
- production
- postproduction.

### **Process/Skill Questions**

- How does each phase of video production affect the final outcome?
- How do the three phases of video production relate to writing a research paper (i.e., English composition) or completing a science project (i.e., the scientific method)?
- How can preproduction affect postproduction?
- How does the intended target audience influence production decisions?
- In the postproduction phase, what might the client ask to see?
- What might the client ask to see during a progress-check meeting?

## **Common Career Technical Core**

### **AR-AV4**

Design an audio, video and/or film production.

## **ITEEA National Standards**

### **12. Use and Maintain Technological Products and Systems**

### **17. Information and Communication Technologies**

## **TSA Competitive Events**

### **Digital Video Production**

### **On Demand Video**

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# **Postproduction: Editing Video**

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## **Task Number 68**

### **Define time code.**

#### **Definition**

Definition of time code should include

- describing how frame and time code relate to the Society of Motion Picture and Television Engineers (SMPTE)

- defining time code.

### **Process/Skill Questions**

- What is the format of a time code?
- What is a clip?
- How is time code used in the editing process?

### **Common Career Technical Core**

#### **AR-AV3**

Demonstrate technical support skills for audio, video and/or film productions.

### **ITEEA National Standards**

#### **12. Use and Maintain Technological Products and Systems**

### **TSA Competitive Events**

#### **Digital Video Production**

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## **Task Number 69**

### **Edit video, using software-based editing equipment.**

#### **Definition**

Editing should include

- an analysis of raw footage
- a modification of raw footage
- a comparison of video in progress to original storyboard and script.

### **Process/Skill Questions**

- How can software-based editing programs save money?
- What are some types of software-based editing systems?
- What is nondestructive editing?

### **Common Career Technical Core**

### **AR-AV3**

Demonstrate technical support skills for audio, video and/or film productions.

## **ITEEA National Standards**

### **12. Use and Maintain Technological Products and Systems**

## **TSA Competitive Events**

### **Digital Video Production**

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## **Task Number 70**

### **Demonstrate file-management techniques.**

#### **Definition**

Demonstration should include

- labeling, moving, copying, or modifying files in a logical, efficient fashion
- describing digital storage and transfer and scene/clip logging.

#### **Process/Skill Questions**

- What are the costs associated with linear versus non-linear editing equipment?
- How many video and audio channels are available on each editing system?
- What are the advantages and disadvantages of each?
- What are the differences between analog and digital recordings?
- How can poor file management hinder the production?
- How does file management apply to everyday life?
- What are the consequences of having a poor logging system?
- How does clip logging compare or contrast with cleaning your locker?

## **Common Career Technical Core**

### **AR-AV3**

Demonstrate technical support skills for audio, video and/or film productions.

## **ITEEA National Standards**

### **12. Use and Maintain Technological Products and Systems**

## **TSA Competitive Events**

### **Digital Video Production**

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## **Task Number 71**

### **Apply basic audio levels, overmodulation, and mixing techniques.**

#### **Definition**

Application should include

- using a variety of audio elements: natural sound, narration, sound effects, and music
- mixing by editing audio tracks independently.

#### **Process/Skill Questions**

- How does sound affect the overall coherency of a production?
- When editing multiple audio tracks, how are the levels of each determined?
- What are some problems associated with recording sound?
- What is the purpose of a voice-over?
- What is overmodulation?

#### **ITEEA National Standards**

##### **12. Use and Maintain Technological Products and Systems**

## **TSA Competitive Events**

### **Digital Video Production**

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## **Task Number 72**

### **Edit a simple multi-track, mixed-media sequence.**

## **Definition**

Editing a simple sequence should include arranging a combination of shots in a logical order to tell a story.

## **Process/Skill Questions**

- What is an edit log?
- Why is an edit log useful?
- What factors determine the sequence of shots?

## **Common Career Technical Core**

### **AR-AV3**

Demonstrate technical support skills for audio, video and/or film productions.

## **ITEEA National Standards**

### **12. Use and Maintain Technological Products and Systems**

## **TSA Competitive Events**

### **Digital Video Production**

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## **Task Number 73**

### **Apply basic video effects and transitions.**

#### **Definition**

Application should demonstrate the proper pacing and timing of transitions, using the following video effects:

- Dissolves
- Fades
- Wipes
- Motion

#### **Process/Skill Questions**

- In what situations should editing effects be added? Avoided?

- What equipment or software can be used to produce editing effects?
- How do editing effects add to the overall appeal of the production?

## **Common Career Technical Core**

### **AR-AV3**

Demonstrate technical support skills for audio, video and/or film productions.

## **ITEEA National Standards**

### **12. Use and Maintain Technological Products and Systems**

## **TSA Competitive Events**

### **Digital Video Production**

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# **Postproduction: Mastering the Video**

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## **Task Number 74**

### **Demonstrate file compression techniques for various distribution methods.**

#### **Definition**

Demonstration should include

- digital file compression/decompression on codecs
- compression for various output (e.g., web, mobile devices, DVD, broadcast).

#### **Process/Skill Questions**

- What is the universal compression method for the web?
- Why is compression used?
- What are the negative effects of compression?

## **Common Career Technical Core**

### **AR-AV3**

Demonstrate technical support skills for audio, video and/or film productions.

## **ITEEA National Standards**

### **12. Use and Maintain Technological Products and Systems**

## **TSA Competitive Events**

### **Digital Video Production**

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## **Task Number 75**

### **Critique video productions.**

#### **Definition**

Critiques should include a comparison of writing, filming, and editing techniques and provide an opportunity for exploration and growth. Critiques should be completed for self and peers and include

- positive and negative comments on aspects of the project
- suggestions for improvement
- instructional benefits
- teamwork (i.e., collaboration, communication)
- constructive criticism
- reflection on the process and evolution of the project.

#### **Process/Skill Questions**

- How might a good production influence an audience?
- What is the difference between critiquing and criticizing?
- What might happen if you did not critique your own work?
- What should occur during and after a critique?

## **Common Career Technical Core**

### **AR-AV3**

Demonstrate technical support skills for audio, video and/or film productions.



## **ITEEA National Standards**

**13. Assess the Impact of Products and Systems**

**17. Information and Communication Technologies**

## **TSA Competitive Events**

**Digital Video Production**

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## **Task Number 76**

### **Analyze final audio enhancements.**

#### **Definition**

Analysis should include

- setting levels
- adjusting gain
- panning
- using various listening methods
- optimizing audio levels for distribution.

#### **Process/Skill Questions**

- What are the negative effects of an unwanted noise?
- What is the difference between a live recording and a studio-enhanced recording?
- When might it be important to include natural sound?

#### **Common Career Technical Core**

##### **AR-AV3**

Demonstrate technical support skills for audio, video and/or film productions.

## **ITEEA National Standards**

**13. Assess the Impact of Products and Systems**

**17. Information and Communication Technologies**

## **TSA Competitive Events**

### **Digital Video Production**

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## **Task Number 77**

### **Assemble a final video reel or portfolio.**

#### **Definition**

Assembly of a compilation of parts of a greater whole to demonstrate specific skills, including

- full documentation for copyright privileges (e.g., release forms, copyright for music and images used)
- final credits
- script and storyboard shot list.

#### **Process/Skill Questions**

- Why is it important to document copyrighted work?
- Who might request a copy of your portfolio reel?
- What is the difference between a portfolio reel and a resume?

#### **Common Career Technical Core**

##### **AR-AV3**

Demonstrate technical support skills for audio, video and/or film productions.

#### **ITEEA National Standards**

##### **12. Use and Maintain Technological Products and Systems**

## **TSA Competitive Events**

### **Digital Video Production**

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## **SOL Correlation by Task**

39	Research the development of broadcasting from early radio to present-day television and broadband.	English: 10.5, 10.8, 11.5, 11.8, 12.5, 12.8 History and Social Science: VUS.10, WHII.9
40	Describe the function, role, and influence of video media on society.	English: 10.2, 11.2, 12.2 History and Social Science: VUS.8, VUS.9, VUS.10, VUS.11, VUS.12, VUS.13, VUS.14, WHII.9, WHII.10, WHII.11, WHII.12, WHII.13, WHII.14
41	Analyze the expanding media landscape, the top media delivery providers, and the effects on media production and consumer habits.	
42	Evaluate the laws and ethical concerns affecting video media.	English: 10.5, 10.8, 11.5, 11.8, 12.5, 12.8 History and Social Science: GOVT.9, GOVT.15
43	Identify various video formats and their characteristics.	
44	Compare the physical compositions of various recording media.	
45	Compare international broadcast standards.	English: 10.5, 10.8, 11.5, 11.8, 12.5, 12.8 History and Social Science: GOVT.9, GOVT.12, GOVT.15
46	Analyze the format, components, and composition techniques in a video storyboard and script.	English: 10.5, 11.5, 12.5
47	Compose a video script.	English: 10.6, 10.7, 11.6, 11.7, 12.6, 12.7
48	Write a public service announcement (PSA) storyboard and script.	English: 10.6, 10.7, 11.6, 11.7, 12.6, 12.7 History and Social Science: GOVT.1, VUS.1
49	Write a news story or long news feature script.	English: 10.6, 10.7, 11.6, 11.7, 12.6, 12.7 History and Social Science: GOVT.1, VUS.1
50	Write a commercial storyboard and script.	English: 10.6, 10.7, 11.6, 11.7, 12.6, 12.7
51	Write a(n) instructional, biographical, documentary, or historical storyboard and script.	English: 10.6, 10.7, 11.6, 11.7, 12.6, 12.7 History and Social Science: GOVT.1, VUS.1
52	Identify the objectives of a production.	
53	Create a production proposal (i.e., treatment).	English: 10.6, 10.7, 11.6, 11.7, 12.6, 12.7

54	Prepare a production budget.	
55	Develop a production schedule.	
56	Define roles of production personnel and their tasks.	
57	Demonstrate production safety techniques.	
58	Identify video production commands and terminology.	English: 10.5, 11.5, 12.5
59	Demonstrate video production commands and terminology.	
60	Demonstrate camera techniques.	
61	Identify the types and essential parts of video cameras.	English: 10.2, 11.2, 12.2
62	Demonstrate situational awareness.	
63	Identify microphones and their applications.	
64	Identify the operating procedures for essential production equipment.	
65	Create full-screen graphics and boxes, using a graphics generator or computer-based graphics program.	Mathematics: COM.1, COM.12
66	Apply various lighting instruments and lighting techniques.	
67	Produce a video.	
68	Define time code.	
69	Edit video, using software-based editing equipment.	
70	Demonstrate file-management techniques.	
71	Apply basic audio levels, overmodulation, and mixing techniques.	
72	Edit a simple multi-track, mixed-media sequence.	
73	Apply basic video effects and transitions.	
74	Demonstrate file compression techniques for various distribution methods.	
75	Critique video productions.	English: 10.5, 11.5, 12.5
76	Analyze final audio enhancements.	
77	Assemble a final video reel or portfolio.	English: 10.5, 11.5, 12.5

## Entrepreneurship Infusion Units

Entrepreneurship Infusion Units may be used to help students achieve additional, focused competencies and enhance the validated tasks/competencies related to identifying and starting a new business venture. Because the unit is a complement to certain designated courses and is not mandatory, all tasks/competencies are marked “optional.”



# Appendix: Credentials, Course Sequences, and Career Cluster Information

## Industry Credentials: Only apply to 36-week courses

- College and Work Readiness Assessment (CWRA+)
- Digital Video Editor (DVE) Examination
- National Career Readiness Certificate Assessment
- Workplace Readiness Skills for the Commonwealth Examination

**Concentration sequences:** *A combination of this course and those below, equivalent to two 36-week courses, is a concentration sequence. Students wishing to complete a specialization may take additional courses based on their career pathways. A program completer is a student who has met the requirements for a CTE concentration sequence and all other requirements for high school graduation or an approved alternative education program.*

- Communication Systems (8415/36 weeks)
- Communication Systems (8418/18 weeks)
- Digital Visualization (8459/36 weeks)
- Imaging Technology (8474/18 weeks)
- Imaging Technology (8455/36 weeks)

<b>Career Cluster: Arts, Audio/Video Technology and Communications</b>	
<b>Pathway</b>	<b>Occupations</b>
<b>Audio and Video Technology and Film</b>	<b>Audio and Video Equipment Technician Audio-Video Designer, Engineer Editor Multimedia Artist, Animator Sound Engineering Technician</b>
<b>Journalism and Broadcasting</b>	<b>Broadcast Technician Editor Program Director Radio, TV Announcer Radio, TV Reporter</b>
<b>Performing Arts</b>	<b>Cinematographer Lighting Designer Technical Director Video, Film Editor</b>
<b>Visual Arts</b>	<b>Media Planner, Buyer Multimedia Artist, Animator</b>