



## Instructional Development Series

# Employing Audiovisual Aids

## Course Plan

### Course Details

**Certification:** FSTEP: Instructional Development Series

**CTS Guide:** None

**Description:** This course covers the principles and selection of media in the instructional process, employment of basic and advanced forms of instructional media, use of computers in the instructional process, and individualized instruction programs. Teaching demonstrations are required of all participants.

**Designed For:** Personnel preparing for a college level fire instructor, SFT Certified Training Instructor position, or career development for teaching SFT Instructional Curriculum.

**Prerequisites:** Instructor I recommended  
Instructor II recommended

**Standard:** Complete all group activities and formative tests. Pass all individual activities without omitting critical criteria as identified on activity sheet(s).  
Complete all summative tests with a minimum score of 80%.

**Hours:** Lecture: 20:30  
Activities: 15:30  
Testing: 03:00

**Hours (Total):** 39:00

**Maximum Class Size:** 25

**Instructor Level:** SFT Credentialed Instructor. The primary instructor should meet SFT Instructor II qualifications or higher. Alternatively, the primary instructor must also have completed an intensive FSTEP course in testing as well as an FSTEP course that surveys the areas of testing, audiovisual presentations, e-learning delivery and learning management systems, and group dynamics. Assistant instructors (skills evaluators) should meet Instructor II qualifications or higher.

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**Instructor/Student Ratio:** 1:25

**Restrictions:** None. Instructor must submit letter for approval of conditions outside the parameters of normal classroom instruction, e.g. class size exceeds 25, compressed course delivery, and/or approval from State Fire Training for distance learning format.

**SFT Designation:** FSTEP

### Required Resources

#### Instructor Resources

To teach this course, instructors needs:

- *Fire and Emergency Services Instructor, 8th edition*, IFSTA 2012, ISBN 978-0-87939-441-7
- *Fire Service Instructor: Principles and Practice, 2nd edition*, Jones & Bartlett Learning, 2014, ISBN: 9781449670832
- Additional instructional resources can be downloaded from publisher websites
- Student Activities are available on the SFT website at:  
<http://osfm.fire.ca.gov/training/SFTCurriculum>

Note: Important points not already covered in the above texts are called out in bullet points below the enabling learning objective (ELO) in each topic.

#### Student Resources

To participate in this course, students need textbooks, as indicated by the instructor:

- *Fire and Emergency Services Instructor, 8th edition*, IFSTA 2012, ISBN 978-0-87939-441-7
- *Fire Service Instructor: Principles and Practice, 2nd edition*, Jones & Bartlett Learning, 2014, ISBN: 9781449670832

Students should be encouraged and asked to supply:

- Their own laptop or tablet with presentation or other viewing hardware and/or software
- Other devices as needed for distance learning

#### Facilities, Equipment, and Personnel

The following facilities, equipment, or personnel are required to deliver this course:

- Standard learning environment or facility, which may include:
- Writing board or paper easel chart
- Markers, erasers
- Amplification devices
- Projector and screen
- Laptop or tablet with presentation or other viewing software
- Access to a computer lab for some sessions
- Access to an outdoor facility for some sessions
- Equipment as needed for student-led demonstrations or psychomotor lessons such as appliances, extinguishers, hose, hand tools, ladders, power tools, protective equipment/clothing, rope, salvage equipment, simulation materials.

### Unit 1: Introduction

#### Topic 1-1: Orientation and Administration

##### Terminal Learning Objective

At the end of this topic, a student will be able to identify facility and classroom requirements and identify course objectives, events, requirements, assignments, activities, resources, evaluation methods, and participation requirements in the course syllabus.

##### Enabling Learning Objectives

1. Identify facility requirements
  - Restroom locations
  - Food locations
  - Smoking locations
  - Emergency procedures
2. Identify classroom requirements
  - Start and end times
  - Breaks
  - Electronic device policies
  - Special needs and accommodations
  - Other requirements as applicable
3. Review course syllabus
  - Course objectives
  - Calendar of events
  - Course requirements
  - Student evaluation process
  - Assignments
  - Activities
  - Required student resources
  - Class participation requirements

##### Discussion Questions

1. What is a formative test? What is a summative test?

##### Activities

1. To be determined by the instructor.
2. Activity: Have students pair up with someone they do not know. For five minutes, interview each other (2 ½ minutes each). Be prepared to introduce the other student to the class. Allow 30 minutes.

#### Topic 1-2: Instructor Certification Process

##### Terminal Learning Objective

At the end of this topic, a student will be able to identify different levels in the Instructor certification track, the courses and requirements for Instructor I certification, and be able to describe the certification task book and testing process.

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### Enabling Learning Objectives

1. Identify the different levels of certification in the Instructor certification track
  - Instructor I
  - Instructor II
  - Instructor III
2. Identify the courses required for Instructor I
  - Instructional Methodology
2. Identify any other requirements for Instructor I
3. Describe the certification task book process
  - Complete all prerequisites and course work
  - Submit application and fees to request certification task book
  - Complete all job performance requirements included in the task book
  - Must have identified evaluator verify individual task completion via signature
  - Must have Fire Chief or authorized representative verify task book completion via signature
  - Must be employed by a California Fire Agency in the position prior to submitting completed task book to State Fire Training
4. Describe the certification testing process
  - Complete coursework
  - Schedule online certification test
  - Schedule skills evaluation test

### Discussion Questions

1. How many levels are there in the Instructor certification track? What are they?
2. By completing three identified of the FSTEP classes, what does that qualify you to do?

### Activities

1. To be determined by the instructor.

## Topic 1-3: Definition of Duties

### Terminal Learning Objective

At the end of this topic, a student, given the definitions of duty, will be able to define the role of the Instructor(s) with regard to program management, instructional development, instructional delivery, and evaluation and testing.

### Enabling Learning Objectives

1. Describe program management
  - The management of basic resources and the records and reports essential to the instructional process
2. Describe instructional development
  - The review and adaptation of prepared instructional materials
  - The Instructor I should not alter the content or the lesson objectives in this process
3. Describe instructional delivery
  - The delivery of instructional sessions utilizing prepared course materials
4. Describe evaluation and testing

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- The administration and grading of student evaluation instruments
  - Primarily deals with student evaluation; however, the Instructor I could be required to conduct program evaluations according to policies and procedures.
5. Describe Instructional classes included in the Fire Service Training and Education Program (FSTEP) that Instructors must complete to qualify for teaching Instructor Curriculum
- The administration and grading of student evaluation instruments

### Discussion Questions

1. What are the basic definitions of the Instructor levels in State Fire Training?
2. What is the basis for the three core classes identified in FSTEP to qualify Instructors to teach the Level I through Level III curriculum?
3. What are the restrictions of an Instructors regarding testing?

### Activities

1. To be determined by the instructor.

## Unit 2: History of Audiovisual Development and Education

### Topic 2-1: History of Audiovisual and Educational Development

#### Terminal Learning Objective

At the end of this topic, a student, given the evolution of historical educational working with audiovisual material, will be able to describe and define the utilization of audiovisual material into the educational field, so that the student can determine the significance of audiovisual materials with educational development.

#### Enabling Learning Objectives

1. Describe the introduction of historical audiovisual into educational use
  - Started around the 1930s, at this time it provided a revolutionary way for people to communicate, not just verbally, but visually or both at the same time
  - Survey performed 1933, 52% of American schools were using visual films and 3% were using sound films according to the National Education Association (NEA)
  - Audiovisual development gain momentum after World War II
    - This was a result of first-hand experience of rapid, massive training through the use of motion pictures and other audiovisual media
2. Describe the transition of audiovisual in the educational system
  - Baby boomers, entering the school, identified the need for technological and pedagogical support
    - In 1947, the Department of Visual Instruction (DVI) of NEA in the United States changed its name to the Department of Audiovisual Instruction (DAVI), which developed into today's Association for Educational Communications and Technology (AECT)
3. Describe the mission of DAVI
  - *The necessity for teaching more and more without increasing the class period, school day, or graduation age;*

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- *the futility of trying to provide meaningful learning experiences without showing that which cannot be adequately expressed or understood thru words alone / the tragic neglect of the paramount responsibility for building better citizens of the nation and of the world by instilling desirable attitudes and appreciations thru the use of dramatic, emotionally derived learning*
  - *these are some of the vital problems, which can be solved best, if not only, thru the use of audiovisual materials. ("AECT History." 2010)*
4. Identify the reliance of utilizing audiovisual in our learning environments
    - Interesting to note, that audiovisual was viewed as the best, or the only solution to "teaching more" and providing "meaningful learning experience"
  5. Identify how the Integration of audiovisual in the field of education was made possible by the concentrations of many people:
    - Thomas Edison, 1922: inventor of photograph and motion pictures believe that quote motion picture is destined to revolutionize our educational system in that in a few years it will supplant largely, if not entirely, that use textbooks"
    - Edgar Dale, 1946: "Cone of Experience" was a tool for media selection from concrete teaching techniques at the bottom of the cone to the most abstract techniques at the top printed in his text book, "AudioVisual Methods and Teaching"
    - James Finn, 1963: president of DAV I at the time, defined "AudioVisual Communication" in his article "The Changing Role of the Audiovisual Process And Education: A Definition and a Glossary of Related Terms" identifying that "Audiovisual communication is that branch of educational theory and practice concerned primarily with the design and use of messages which control the learning process"
  6. Describe the discourse of both Finn and Dale
    - *Both agreed that it is not the medium that controls the efficiency of communication, but appropriate media, or a combination of medium needs to suit particular user and content*
  7. Describe how society with or without the fire service is happening at an ever-increasing speed.
    - "Life-long-learning is quickly becoming a need instead of something that was nice to do". Tom Forster, Fire Instructor

### Discussion Questions

1. What year did are audiovisual equipment historically make a mark in the educational arena?
2. What was the role of Department of Audiovisual Instruction (DAVI)?
3. Describe the reliance of utilizing audiovisual in our learning environments?

### Activities

1. To be determined by the instructor

### Instructor Notes

1. Involve the students with the discussion regarding the significance of interacting with each other and audiovisual materials in a learning environment.

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### Topic 2-2: Historical Media

#### Terminal Learning Objective

At the end of this topic, a student, given examples of historical media, will be able to describe the evolution of training aids, so that audiovisual equipment used in classrooms is reviewed and becomes a basis for expanding in learning environments.

#### Enabling Learning Objectives

1. Identify typical training aids that the student audience has been instructed with
  - Flannel boards
  - Chalk Boards
  - Film Cameras
  - Slide and Overhead Projectors
  - Video Tapes (VHS, Beta)
2. Describe the transition to current media formats
  - Negative film
  - Positive film
  - Analog
  - Digital

#### Discussion Questions

1. What are some audiovisual materials used to influence your learning, but which are no longer in use?
2. How has the evolution of media affected student learning?
3. What challenges do changing media create for instructors?

#### Activities

1. To be determined by the instructor

#### Instructor Notes

1. It identifies outdated training aids that the instructor may encounter.
2. This topic can be helpful in pulling together the cross-generational classroom. The media discussed should be based on the individuals in the classroom. It is meant to address relatively recent media (1980s) as opposed to older training aids.

## Unit 3: Legal Considerations

### Topic 3-1: Legal Concerns in Instructional Media Usage

#### Terminal Learning Objective

At the end of this topic, a student, given a fair-use scenario, will be able to apply current copyright laws, so that all federal, state and local laws are followed with consideration for media use, so that students remain in compliance with principles of the “fair use” doctrine.

#### Enabling Learning Objectives

1. Identify current copyright law and how it applies to educational instruction
  - “Original works of authorship”
  - Fair use



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- Ownership and intellectual property
  - Public domain
  - Obtaining permissions
2. Identify the four factors of fair use
    - Purpose and character of use
    - Nature of copyrighted work
    - Amount of work taken
    - Effect upon the potential market
  3. What are the requirements of Copyright
    - Copyright protection subsists, in accordance with this title, in original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device
  4. Describe the importance of having an electronic use policy
    - Agency or Department
    - Classroom use
    - Restrictions
  5. Describe applicable Local, State or Federal Laws
    - How long copyright protection endures
      - Work originally created on or after January 1, 1978 (fixed in a tangible form for the first time) is automatically protected from the moment of its creation and is ordinarily given a term of enduring for author's life plus an additional 70 years after the author's death
      - In the case of a "joint work prepared by two or more authors", the term last for 70 years after the last surviving author's death
    - Fonts and Font size / Use of serif or sanserif fonts
    - Reasonable use recording (Employees or students with prescription),
    - Alternative Methods and Formats
    - Adapting audiovisual to different learning styles
    - Form of protection provided by the laws of the United States
      - Title 17 of the U.S. Code
      - Code of Federal Regulations Title 37, Chapter II
      - Compendium of U.S. Copyright Office Practices
      - Americans with Disabilities Act (Accommodations)
    - Transfer of copyright
    - International copyright
    - Copyright registration
      - Poor-person's copyright

### Discussion Questions

1. How have you seen instructors or coworkers use emerging technologies to their advantage?

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### Activities

1. Instructor should create an activity directing students to apply copyright law.

### Instructor Notes

1. Instructor should refer to [www.copyright.gov](http://www.copyright.gov).
2. Instructor should refer to [www.creativecommons.org](http://www.creativecommons.org).

## Topic 3-2: Eliminating Bias in Instructional Materials

### Terminal Learning Objective

At the end of this topic, a student, given a diverse audience, will be able to eliminate bias in instructional materials, so that all bias is eliminated from audiovisual presentations.

### Enabling Learning Objectives

1. Identify bias and sources of bias in instructional materials
  - Gender
  - Race
  - Cultural stereotypes
  - Regional jargon
  - Other considerations
2. Describe methods for eliminating bias

### Discussion Questions

1. What is bias?
2. What are some examples of regional jargon? When might this be problematic?

### Activities

1. To be determined by the instructor.

### Instructor Notes

1. Instructors should be prepared to give example of regional jargon.

## Topic 3-3: Security and Access of Electronic Data

### Terminal Learning Objective

At the end of this topic, a student, given examples of data storage and potential electronic issues, will describe methods used to secure electronic data and the responsibility to respond to public information requests, so that access to storage systems and data access can be completed in compliance with federal, state laws and within guidelines of the AHJ.

### Enabling Learning Objectives

1. Describe virus protection
2. Describe password protection
3. Describe data encryption
4. Describe methods for backing up information/record keeping
5. Describe the lifespans of various data storage methods
6. Describe the requirements of data archiving, requisition or public access
  - Public information requests
    - Your **request** must be in writing to the governmental entity you believe maintains the documents

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- Only written **requests** trigger a governmental body's obligations under the **Public Information Act**
- Your **request** should be for documents or other **information** that is already in existence
- Legal aspects
- Time limits
- Document retention
- Life span
  - Life span of document before being destroyed
  - Restrictions of documents that can not be destroyed
  - Implications to training documents, training data, training records, reference materials
  - What is the standard or reference of your performance and training
- Public records are broadly defined to include "any writing containing information relating to the conduct of a public's business prepared, owned, used or retained by any state or local agency regardless of physical form or characteristic
- California Attorney General, another court has stated:
  - *This definition is intended to cover every conceivable kind of record that is involved in the governmental process and will pertain to any new form of record-keeping instrument as it is developed. Only purely personal information unrelated to 'the conduct of the public's business' could be considered exempt from this definition, i.e., the shopping list phoned from home, the letter to a public officer from a friend which is totally void of reference to governmental activities*

### Discussion Questions

1. What are some concerns associated with portable data storage?
2. What are some examples of threats to your electronic media?

### Activities

1. To be determined by the instructor.

### Instructor Notes

1. [Insert information cadre feels must be communicated to the instructor]

## Unit 4: Utilization of Instructional Aids

### Topic 4-1: Why Use Audiovisual Aids

#### Terminal Learning Objective

At the end of this topic, a student, given the importance of audiovisuals working with audiences or students, will be able to determine benefits for the individual student or audience as a groups, so that audiovisual materials can be selected appropriately and with priority for maximum benefit.

#### Enabling Learning Objectives

1. Describe how students learn through their senses

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- 1% of what we learn is through **taste**
  - 1.5% of what we learn is through **touching**
  - 3.5% is through **smelling**
  - 11% is through **hearing**
  - 83% of what we learn is through **sight**
2. Describe an Old Chinese Proverb
    - “Tell me and I’ll forget; show me and I may remember; involve me and I’ll understand”
  3. Describe benefits of both the audience and presenter by using VisualAids
    - Focusing your audiences attention
    - Controlling what you reveal to discuss point by point
    - Being more persuasive
    - Gaining your audience’s agreement a larger percentage of the time
    - Presenting concepts in less time while seeming wiser because you do
    - Appearing to be more competent
    - Looking better prepared
    - Being forced to simplify and prepare ahead of time
    - Alleviating the constant attention on you as the presenter
    - Getting a chance to think and “breathe”
    - Staying on track
    - Having a place to write notes
    - Ensuring all information is covered
  4. Describe benefits of student using VisualAids
    - Retaining more of the discussion or presentation
    - Understanding concepts faster
    - Being more stimulated and entertained
    - Enjoying a shorter decision making process
    - Feeling more important and valued
    - Being more willing to participate
    - Spending less time in courses or meetings

### Discussion Questions

1. How do students learn utilizing their senses??
2. What are the benefits using audiovisual materials by the presenter or instructor?
3. What are the benefits of students by using audiovisual materials during a learning session?

### Activities

1. To be determined by the instructor
2. Allow 8 Hours for student teaching demonstrations

### Instructor Notes

1. Discuss the teaching demonstrations and the importance of developing and utilizing audiovisual instruments during their presentation.

### Topic 4-2: Classes of Instructional Aids:

#### Terminal Learning Objective

At the end of this topic, a student, given non-projected and projected instructional aids, will be able to identify the advantages and disadvantages associated with various instructional aids, so that classes of audiovisual types can be identified and appropriately utilized for particular learning environments.

#### Enabling Learning Objectives

1. Major classes of audiovisual instruments
  - Printed (ancillary)
  - Non-projected
  - Projected
2. Describe printed or ancillary components
  - Student manuals
  - Student handouts
  - Activity Sheets
  - Assignment sheets
  - Skill sheets
  - Information sheets
  - Work sheets
  - Study sheets
3. Describe non-projected instructional aids
  - Easel charts / Charting
  - Mock ups and models
  - Cutaways
  - Boards (chalk/dry-erase)
  - Props or Simulation Props
    - Pump simulators
    - Live fire simulators (propane simulators)
    - Simulator trailers
    - Roof simulators
    - Sand table (CalFire Academy – lone)
4. Describe projected instructional aids
  - Simulators (two dimensional / 3 dimensional)
    - Fire
    - Environmental simulators
    - Driving
  - Software options
    - Electronic slide presentations
    - E-books
    - Publishing software
  - Videos and photos

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- Virtual reality
  - Utilize your cell phone (smartphone)
- Smartboards
- Visual presenters

### Discussion Questions

1. What are some ways to make the learning experience more realistic?
2. What factors should be considered when selecting a type of instructional aid?
3. Under what circumstances could an instructional aid be distracting?
4. Can there be a combination of one or more classes of audiovisual tools?

### Activities

1. To be determined by the instructor.

### Instructor Notes

1. Brainstorm with the students the major categories for classes of audiovisual instruments.

## Topic 4-3: Development and Design Effective Instructional Materials

### Terminal Learning Objective

At the end of this topic, a student, given a lesson plan and instructional aid development concepts, will be able to design and develop effective instructional aids, so that the objectives of a lesson plan and transition with audiovisual materials occurs to support terminal and learning objectives.

### Enabling Learning Objectives

1. Define a scoring system to evaluate instructional aids
2. Describe considerations for each phase of instructional aid development which is similar to video development
  - Preproduction and storyboarding
  - Production
  - Postproduction
3. Describe design principles for instructional aids that support learning objectives
4. Describe effective transition techniques within and between instructional aids
5. Incorporate best practices for instructional aid development
6. Describe guidelines for media development and design
  - Design balance
  - Kill principal
  - Font selection
  - Rule of thirds
  - Color selection / color communication
  - Graphic placement
  - Visual cues
  - Resources
  - Reminder: Legal considerations

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- Have an evaluator or non-topic person review the developed instructional materials for:
  - Accuracy
  - Spelling
  - Simplicity
  - Jargon
  - Relevancy
  - Utilize the score sheet for the scoring criteria

### Discussion Questions

1. What are some criteria for creating effective instructional aids?
2. How do your chosen instructional aids support your instructional objectives?

### Activities

1. Students must create a minimum of two effective instructional aids to be presented in their student teaching demonstrations.
2. Activity for development of instructional materials should not exceed 3 hours

### Instructor Notes

1. Instructor must develop a rating system with the students to evaluate their instructional aids.
2. The instructor must ask students to bring a lesson plan, preparing for a demonstration using instructional aids that the students will create in class.
3. The demonstration must be on the effective development and design of an instructional aid, to be approved by the instructor.
4. The instructor should cover the production process for the instructional aids as well as being incorporated in photography and videography.

## Topic 4-4: Development and Design Effective Electronic Presentation Materials

### Terminal Learning Objective

At the end of this topic, a student, given a lesson plan and instructional aid development tools, will be able to design and develop effective electronic instructional aids utilizing PowerPoint or KeyNote, so that audiovisual design concepts are followed reducing confusion with students and clarifying lesson objectives.

### Enabling Learning Objectives

1. Define a scoring system to evaluate instructional aids
2. Describe software systems for developing electronic presentations
  - PowerPoint (Microsoft)
  - Keynote (Apple)
  - Multiple electronic presentation software(s) available
3. Describe considerations for each phase of instructional aid development which is similar to video development
  - Preproduction and storyboarding
  - Production
  - Postproduction

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4. Describe design principles for electronic instructional aids that support learning objectives
5. Describe effective transition techniques within and between instructional aids
6. Incorporate best practices for instructional aid development
7. Describe guidelines for media development and design
  - Design balance
  - Kill principal
  - Font selection
  - Rule of thirds
  - Color selection / color communication
  - Graphic placement
  - Visual cues
  - Resources
  - Reminder: Legal considerations
  - Have an evaluator or non-topic person review the developed instructional materials for:
    - Accuracy
    - Spelling
    - Simplicity
    - Jargon
    - Relevancy
    - Utilize the score sheet for the scoring criteria

### Discussion Questions

1. What are some criteria for creating effective electronic instructional aids?
2. How do your chosen instructional aids support your instructional objectives?

### Activities

1. Students must create an electronic presentation to be presented in their student teaching demonstrations.
2. Activity for development of instructional materials should not exceed 3 hours

### Instructor Notes

1. Instructor must develop a rating system with the students to evaluate their instructional aids.
2. The instructor must ask students to bring a lesson plan, preparing for a demonstration using instructional aids that the students will create in class.
3. The demonstration must be on the effective development and design of an instructional aid, to be approved by the instructor.
4. The instructor should cover the production process for the instructional aids as well as being incorporated in photography and videography.

## Topic 4-5: Effective Use of Audiovisual Equipment



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### Terminal Learning Objective

At the end of this topic, a student, given media selection concepts, transition with media formats and basic maintenance concepts of equipment selected, will be able to deliver the presentation concepts without confusion, so that multiple audiovisual materials can be adapted to diverse learning audience without bias and quickly adapting to alternate media formats if unable to quickly bring equipment back into service.

### Enabling Learning Objectives

1. Describe the process of matching media selection with terminal learning objectives, enabling objects, course outcomes or course objectives
  - Select media to deliver, reinforce and support the enabling learning objectives
  - Student needs
  - Media should clarify learning points
  - Media should reduce instructional time, otherwise needed, if only verbal explanation is used for presenting instructional content
2. Describe the necessity of confirming relevancy with:
  - Objectives
  - Accuracy
  - Appropriate use of media
3. Describe the transition with current media formats
4. Describe how media content influences instructional time management
5. Describe the necessity to match media content with diverse learning styles
6. Identify utilizing different media formats for selected audience types
  - The size of the audience
  - The need for audience participation
    - Consider presentation
    - Room size
    - Arrangement
    - Lighting
    - Acoustics
    - Climate
    - Safety
7. Describes the sharing and packaging of electronic audiovisual materials
  - Archiving
  - iCloud services
  - Moving content with hardware tools
  - Moving content without hardware tools
8. Describe the process of transitioning between different media formats during instructional delivery
9. Describe the care and maintenance of Audiovisual Equipment/Materials
  - Follow vendor's manuals / owner's manual
  - Consult vendor services / warranties
  - Repair services

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### Discussion Questions

1. What is the one most important element when considering the selection of audiovisual materials or media to be used in the learning session?
2. The sky the necessity relevancy.
3. What is considered when working with the transition of media formats?
4. What are the considerations we're packaging and sharing audiovisual resources?
5. What is the single most important resource when discussing maintenance of audiovisual equipment?

### Activities

1. To be determined by the instructor

### Instructor Notes

1. Have students discuss types of audiovisual equipment in their jurisdictions.

## Topic 4-6: Developing Accessible Instructional Aids and Alternate Media

### Terminal Learning Objective

At the end of this topic, a student, given methods for developing alternate media and instructional aids, will be able to develop accessible instructional aids and alternate media, so that materials can be modified or adapted to students with different learning styles or learning capabilities.

### Enabling Learning Objectives

1. Identify ways to increase the accessibility of instructional aids
  - Sans serif and serif fonts
  - Font size
  - Design elements
    - Color
    - Contrast
2. Identify guidelines for producing instructional and other printed materials in alternate media for persons with disabilities
  - Production of materials in alternate media
    - Audio readers
    - Braille
    - Tactile graphics
    - Large print
    - Electronic texts
  - Guidelines for implementation of Assembly Bill 422
3. Identify local resources available to assist instructors in meeting student needs
4. Identify alternatives for utilizing the media on the run
  - Equipment failures
  - Planning for equipment failures with alternative resources
  - Methods of adapting audiovisual materials for planned events

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### Discussion Questions

1. What are some accessibility considerations an instructor should take into account when creating instructional aids?
2. What legal requirements must be taken into account? How could Assembly Bill 422 affect you as an instructor at your particular agency?

### Activities

1. Instructor must create an activity demonstrating accessibility issues in instructional materials.

### Instructor Notes

1. Instructor must refer to California Community Colleges' chancellor's office and local agency policies and procedures.
2. Instructor must refer to Assembly Bill 422 and the Americans with Disabilities Act.

### Instructor Notes

1. Discussions must include the advantages and disadvantages associated with each type of instructional aid.

## Topic 4-7: Media Conversion and Alternatives

### Terminal Learning Objective

At the end of this topic, a student, given examples of historical media and information for converting media, will be able to describe methods and considerations for converting old media formats for preservation and/or potential future use, so that historical audiovisual formats can be adapted to current electronic formats.

### Enabling Learning Objectives

1. Identify principle considerations for storing and archiving media
  - Preserving Older Media
  - Archiving older media formats with current software
  - Life span of electronic media once archived
  - Other electronic storage issues
  - Size of electronic files
  - Maintaining appropriate software to access the media
2. Identify services and equipment available for media conversion
  - Commercial businesses
  - Scanners
  - Digital converters
  - Resources such as college interns
3. Describe considerations for media conversion
  - Cost
  - Availability
  - Efficiency
  - Relevancy and appropriateness of the media
  - Evaluation of media's ability to meet the learning objectives
  - Legal or licensing considerations

## Employing Audiovisual Aids

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- Permissions for reproduction – Ask for Permission
- 4. Identify media storage systems and methods of access
  - Storage and access to cds or dvds
  - Hardware connection methods change with new storage systems
  - iCloud services becoming more accessible

### Discussion Questions

1. What are some resources available to convert old media?
2. When might it not be necessary to convert old media? When might it not be advisable?
3. What are some challenges or concerns involved in using old media?

### Activities

1. To be determined by the instructor

### Instructor Notes

1. The discussion should broach evaluating appropriateness and relevancy of older media sources. Considerations include gender bias, cultural sensitivity, current best practices, and changes in laws and statutes, such as HIPAA.

## Unit 5: Photography and Videography

### Topic 5-1: Photography

#### Terminal Learning Objective

At the end of this topic, a student, given basic photographic concepts, will be able to capture images, so that electronic images or graphics can be incorporated into ancillary instructional documents or instruments.

#### Enabling Learning Objectives

1. Film Photography (traditional)
  - Film
  - Slide
  - And of course . . . Digital
2. Digital Photography
  - DSLR cameras (digital single lens reflex)
  - Mirror-less cameras (minus the mirror reflex optical viewfinder)
3. Aerial Photography
  - Drones (Fixed Wing)
  - Drones (Quad-copters or Multi-Engine)
  - FPV or VR (First Person View or Virtual Reality)
  - FAA Registration and Regulations
  - FAA - Part 107 Certification
  - AMA Insurance
  - Other
4. Describe the transition through and with current media formats

## Employing Audiovisual Aids

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### Discussion Questions

1. How has photography been involved in just the past 20 years?
2. How can aerial photography be so significant for capturing learning resources?

### Activities

1. To be determined by the instructor

### Instructor Notes

1. This section is intended to only cover the basics of photography.
2. There are many resources for photography classes, which include online and their local colleges.

## Topic 5-2: Videography

### Terminal Learning Objective

At the end of this topic, a student, given basic videography concepts, will be able to capture videos or short electronic clips, so that electronic videos or clips can be incorporated into ancillary instructional instruments or electronic learning media formats or educational programs.

### Enabling Learning Objectives

1. Equipment
  - Camcorders
  - Digital Recorders
  - Computer (Tablet) Recorders
  - Smart phones
2. Video Production
  - Storyboarding
  - Pre-Production
  - Production
  - Post-Production
3. Computers and editing software
4. Describe the transition to current media formats

### Discussion Questions

1. How can storyboarding save you time and cost?
2. Describe the significance of Production time utilizing computers for electronic equipment.

### Activities

1. To be determined by the instructor
2. Video Assignment Allow 2 Hours

### Instructor Notes

1. Make sure to identify any restrictions when the student groups go into the field to record their video project.
2. Confirm that there is a safety officer throughout the whole process in the filming project.
3. Any significant events must be reported to the instructor immediately.

### Unit 6: Managing the Learning Environments

#### Topic 6-1: Classroom Teaching Learning Environments

##### Terminal Learning Objective

At the end of this topic, a student, given guidelines for managing learning environments, will be able to describe and set up different learning environments, so that students can safely and effectively participate, operate and learn in both indoor or outdoor learning environments.

##### Enabling Learning Objectives

1. Smart Classrooms
2. Smart boards
3. Active / Passive
4. Indoor
  - Time management
  - Safety
  - Seating arrangements
    - Center table
    - Herringbone or Chevron pattern
    - Work table
    - U shape
    - Auditorium
  - Student placement / Distance
  - Media utilization
  - Placement of media
    - Keystone correction
  - Projection screens
  - Acoustics
5. Outdoor
  - Time management
  - Safety
  - Determine Site Safety Plan
  - Gordon Graham: “If it is predictable - It is preventable”
6. Safety - Once Again!
  - Reporting
  - Preventing reoccurrence
  - Assign a Safety Officer

##### Discussion Questions

1. What are some elements to consider upon entering a learning environment?
2. What are the different seating arrangements to consider?

## Employing Audiovisual Aids

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3. What are some seating distances that should be considered when establishing the seating arrangement?
4. What could be considered the most often overlooked aspect in outdoor learning environment?

### Activities

1. To be determined by the instructor

### Instructor Notes

1. Allow discussion for increased engagement.

## Topic 6-2: Emerging Technologies in Adult Education

### Terminal Learning Objective ((move to resources))

At the end of this topic, a student, given examples of emerging instructional technologies, will be able to describe trends in technology and their application as training aids, so that resources are described and identified, utilized effectively while forecasting budgetary aspects for audiovisual instruments.

### Enabling Learning Objectives

1. Identify resources for information on emerging technologies
  - Organizations
    - Training magazine
    - American Society for Training and Development
    - National Fire Academy
    - Masie (center and website)
      - The MASIE Center is an international thinktank dedicated to exploring the intersection of learning and technology.
  - Trade conferences
  - Instructor workshops
  - Webinars
  - Internet
  - Private sector
  - Training Resources and Data Exchange (TRADE) (TRADENET)
2. Recognize trends in instructional technology
3. Describe application techniques for emerging technology
4. Partnerships and Collaborations
5. Requesting Resources
6. Cost-Sharing strategies
7. Budget
8. Obtaining Materials
  - Test Banks
  - Repositories
  - Publishers' Materials
  - Internet
9. Electronic Art (Clip Art)

## Employing Audiovisual Aids

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- Commercial
- Personally produced
  - Modification with graphics programs (Ex: Photoshop)

### Discussion Questions

1. What is your obligation as an instructor with regards to remaining current and informed with regards to technology?
2. How have you seen instructors or coworkers use emerging technologies to their advantage?

### Activities

1. To be determined by the instructor

### Instructor Notes

1. The instructor should create a forum for brainstorming and information sharing.

## Topic 6-3: E-Learning

### Terminal Learning Objective

At the end of this topic, a student, given advance technological learning environments, will be able to incorporate and design instructional content, so that individual learners and learning groups can perform in interactive and collaborative learning groups.

### Enabling Learning Objectives

1. Smart classrooms
2. Cloud base learning
3. Distance Learning
  - Conferencing
  - Satellite
  - Podcasts
  - Webinars
4. Challenges of Hybrid Learning
  - Challenges
  - Instructor contact
  - Analog students versus Electronic students performing with the media and the technology
5. Collaborative Learning with internet Learning Groups
6. Story Maps
  - A story map is a strategy that uses a graphic organizer to help students learn the elements of a book or story. By identifying story characters, plot, setting, problem and solution, students read carefully to learn the details. There are many different types of story map graphic organizers.
  - If you have a story that unfolds across several places over a period of time, storymaps can provide an engaging interactive medium with which to tell the story. This post reviews some examples of how interactive map legends can be used to annotate a story, and then rounds up seven tools that provide a great way to get started creating your own story maps.



## Employing Audiovisual Aids

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7. Describe the utilization of the You-Tube Generation
  - Television had a good run, but it may be time to change the channel. With more than one billion hours of viewership every day, YouTube looks [set to soon surpass TV](#) as the most watched format in the U.S.
  - The Wall Street Journal reports that the online video platform has seen a 10-fold increase in viewership over the past five years, due in part to the use of artificial intelligence to predict user preferences and keep people tuned in. (February 2017)

### Discussion Questions

1. What is cloud-based learning?
2. What is hybrid learning?
3. What are some advantages or disadvantages of hybrid learning?
4. How can story maps be effective with interactive learning?
5. What could be possible future for “life after YouTube” training?

### Activities

1. To be determined by the instructor
2. Allow 8 Hours for student teaching demonstrations

### Instructor Notes

1. Create discussion for “life after YouTube” training.

## Unit 7: Student Teaching Demonstrations

### Topic 7-1: Conducting Teaching Demonstration

#### Terminal Learning Objective

At the end of this topic, a student, given a topic and a target audience, will be able to conduct a class using a lesson plan that the instructor has prepared, using multiple teaching methods and techniques to achieve lesson objectives.

#### Enabling Learning Objectives

1. Describe use and limitations of teaching methods and techniques
2. Transition between different teaching methods
3. Conduct small group discussions
  - Problem-solving
  - Facilitating consensus

#### Discussion Questions

1. How would you recognize when you need to implement an alternative method of instruction?
2. What techniques can an instructor employ to keep a small group discussion focused?
3. What media tools could you utilize when leading a small group discussion?

#### Activities

1. Have students compare and contrast instructional techniques used for leading discussion in small groups vs. a lecture presentation.
2. Activity 7-1: Cognitive Teaching Demonstration

## Employing Audiovisual Aids

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### Instructor Notes

1. Conducting small group discussions is covered in depth in the IFSTA text.

## Topic 7-2 Evaluating Student Instructor Lesson Demonstrations

### Terminal Learning Objective

At the end of this topic, a student, given a recent student instructor demonstration and an evaluation form, will be able to evaluate other student instructor presentations to provide constructive feedback that identifies strengths and weaknesses of the teaching demonstration.

### Enabling Learning Objectives

1. Observe a teaching demonstration
2. Document strengths and weaknesses of student instructor performance according to established criteria
3. Facilitate a review and discussion of the teaching demonstration, including instructor style
  - Consider flow of presentation
  - Consider whether teaching style and audience learning styles are well matched

### Discussion Questions

1. What is the purpose of providing oral and written feedback to the student instructor?
2. What is the value of peer evaluation versus instructor evaluation?
3. What is the purpose of facilitating a discussion regarding a teaching demonstration?

### Activities

1. Activity 7-2: Evaluating a Student Instructor's Cognitive Teaching Demonstration as a Primary Evaluator

### Instructor Notes

1. More information about teaching styles can be found in *Teaching With Style* (Grasha, 1996).

## Employing Audiovisual Aids

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### Time Table

Segment	Lecture Time	Activity Time	Total Unit Time
<b>Unit 1: Introduction</b>			
Topic 1-1: Orientation and Administration			
Lecture	00:30		
Activity 1-1: Recommended by SFT		00:30	
Topic 1-2: Instructor Certification Process			
Lecture	00:30		
Activity 1-2: Instructor determined		00:00	
Topic 1-3: Definition of Duties			
Lecture	00:30		
Activity 1-3: Instructor determined		00:00	
<b>Unit 1 Totals</b>	<b>1:30</b>	<b>00:30</b>	<b>2:00</b>
<b>Unit 2: History of Audiovisual Dev. &amp; Education</b>			
Topic 2-1: History of Audiovisual and Educational Development			
Lecture	00:30		
Activity 2-1: Instructor determined		00:00	
Topic 2-2: Historical Media			
Lecture	00:30		
Activity 2-2: Instructor determined		00:00	
<b>Unit 2 Totals</b>	<b>1:00</b>	<b>00:00</b>	<b>1:00</b>
<b>Unit 3: Legal Considerations</b>			
Topic 3-1: Legal Concerns in Instructional Media Usage			
Lecture	1:00		
Activity 3-1: Instructor determined		00:00	
Topic 3-2: Eliminating Bias in Instructional Materials			
Lecture	00:30		
Activity 3-2: Instructor determined		00:00	
Topic 3-3: Security and Access of Electronic/Written Materials			
Lecture	00:30		
Activity 3-3: Instructor determined		00:00	
<b>Unit 3 Totals</b>	<b>2:00</b>	<b>0:00</b>	<b>2:00</b>
<b>Unit 4: Utilization of Instructional Aids</b>			
Topic 4-1: Why Use Audiovisual Aids			
Lecture	1:00		

## Employing Audiovisual Aids

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Segment	Lecture Time	Activity Time	Total Unit Time
Activity 4-1: Instructor determined		00:00	
Topic 4-2: Classes of Instructional Aids			
Lecture	1:00		
Activity 4-2: Instructor determined		00:00	
Topic 4-3: Development and Design Effective Instructional Materials			
Lecture	1:00		
Activity 4-3: Develop Instructional Materials		3:00	
Topic 4-4: Development and Design Effective Electronic Presentation Materials			
Lecture	1:00		
Activity 4-4: Develop Electronic Presentation		3:00	
Topic 4-5: Effective Use of Audiovisual Equipment			
Lecture	1:00		
Activity 4-5: Instructor determined		00:00	
Topic 4-6: Developing Accessible Instructional Aids and Alternate Media			
Lecture	00:30		
Activity 4-6: Instructor determined		00:00	
Topic 4-7: Media Conversion and Alternatives			
Lecture	00:30		
Activity 4-7: Instructor determined		00:00	
<b>Unit 4 Totals</b>	<b>6:00</b>	<b>6:00</b>	<b>12:00</b>
<b>Unit 5: Photography and Videography</b>			
Topic 5-1: Photography			
Lecture	2:00		
Activity 5-1: Instructor determined		00:00	
Topic 5-2: Videography			
Lecture	2:00		
Activity 5-2: Instructor determined		2:00	
<b>Unit 5 Totals</b>	<b>4:00</b>	<b>2:00</b>	<b>6:00</b>
<b>Unit 6: Managing the Learning Environments</b>			
Topic 6-1: Classroom Teaching Learning Environments			
Lecture	1:00		

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Segment	Lecture Time	Activity Time	Total Unit Time
Activity 6-1: Instructor determined		1:00	
Topic 6-2: Emerging Technologies in Adult Education			
Lecture	1:00		
Activity 6-2: Instructor determined		00:00	
Topic 6-3: E-Learning			
Lecture	1:00		
Activity 6-3: Instructor determined		00:00	
<b>Unit 6 Totals</b>	<b>3:00</b>	<b>1:00</b>	<b>4:00</b>
<b>Unit 7: Teaching Demonstrations</b>			
Topic 7-1: Conducting Teaching Demonstrations			
Lecture	00:30		
Activity 7-1: Teaching Demonstrations		8:00	
Topic 7-2: Evaluating Student Instructor Lesson Demonstrations			
Lecture	00:30		
Activity 7-2:			
<b>Unit 7 Totals</b>	<b>1:00</b>	<b>8:00</b>	<b>9:00</b>
<b>Lecture, Activity, and Unit Totals:</b>	<b>20:30</b>	<b>15:30</b>	<b>36:00</b>

### Course Totals

Total Lecture Time (LT)	20:30
Total Activity Time (AT)	15:30
Total Testing Time	03:00
<b>Total Course Time</b>	<b>39:00</b>